



AMAZING STORIES

August 1937

25 Cents

th in the Stratosphere

HENRY J. KOSTKOS

DAVID H. KELLER, M.D.

J. LEWIS BURT

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A paste so delicate in texture that teeth brushed the equivalent of ten years show not the slightest damage to precious enamel . . .

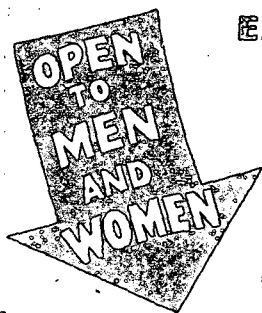
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Within the next two weeks, over 350 men and women will be given the opportunity to open up fine-paying Coffee Agencies right in their own home localities. If you are looking for a bona fide chance to make as high as \$60.00 in a week, starting at once, this company will send you everything you need, give you all the help you require, and back you up with its proven successful plans. You risk no money. A chance to be independent, work as you please, and make more than just a modest living. If you want to know whether there is an opening for you in your own or nearby locality, mail the Application below. By return mail you will be notified whether we have an opening for you, and if we have, you will receive full information about this Coffee Agency Plan. You don't send a penny—just mail the Application. No obligation—you decide after you read the plan. Don't delay. Send your Application at once.

Clip Out and Mail Today!!

COFFEE AGENCY APPLICATION

① **WRITE YOUR
FULL NAME
AND
ADDRESS HERE!**

Name.....
(State whether Mr., Mrs., or Miss)
Address.....
City and State.....

② **HOW MUCH
TIME CAN
YOU DEVOTE
TO COFFEE AGENCY?**

Mark with an "X"

☐ FULL TIME ☐ PART TIME

[Full time pays up to \$35 to \$60
in a week. Part time, either
during the day or evenings, pays
up to \$22.50 in a week.]

③ **STATE WHICH
BONUS YOU
PREFER—
CASH OR FORD
AUTOMOBILE?**

In addition to their cash earnings, we offer our producers a cash bonus of \$500.00 or a brand-new, latest model Ford Tudor Sedan. State which you would prefer if you decide to accept our offer. Mark "X" before your choice.

☐ \$500. CASH BONUS ☐ LATEST MODEL FORD TUDOR SEDAN.

④ **CAN YOU
START AT
ONCE?**

Mark with an "X" ☐ YES ☐ No

If you cannot start at once, state about when you will be able to start.

SEND NO MONEY

**ALL
APPLICATIONS
WILL BE HELD
STRICTLY
CONFIDENTIAL**

There is no money fee of any kind required with this Application. It merely tells us that you would consider running a Coffee Agency in your locality if we have an opening for you. You will be notified by return mail whether your home locality is available. Then you can decide if the money-making possibilities look good to you. No obligation on your part. Those who apply first will be given preference, so be sure to mail your Application without delay—NOW! No letter is required, just the Application. Mail at once to

ALBERT MILLS, President
4019 Monmouth Avenue Cincinnati, Ohio

Please mention NEWSSTAND FICTION UNIT when answering advertisements

AMAZING STORIES

Science Fiction

Vol. 11

AUGUST, 1937

No. 4

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Name

Present Position

Address

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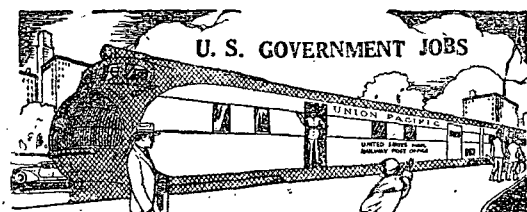
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28x4.40-21	\$1.75	\$0.89		30x3	\$1.75	\$0.78	
28x4.50-20	1.35	.59		30x3-1/2	1.75	.78	
30x4.50-21	2.00	.89		32x4-1/2	2.95	1.12	
28x4.75-19	2.05	.99		34x4-1/2	2.95	1.12	
29x5.00-19	2.05	1.02		36x5	3.35	1.40	
30x5.00-20	2.45	1.02		38x5	3.45	1.50	
5.25-17	.45	.11					
28x5.25-18	.45	.11					
28x5.25-19	.45	.11					
31x5.25-21	.85	.11					
5.50-17	.80	.12					
29x5.50-19	.85	.12					
29x5.50-19	.85	.12					
30x5.50-20	.85	.12					
5.00-18	.35	.09					
6.00-17	.35	.12					
6.25-16	.30	.12					
6.50-17	.40	.25					
80x5.50-18	1.25	1.85					
81x5.50-19	1.20	1.85					
82x5.50-20	1.30	1.85					
84x7.00-20	1.35	1.85					

CORD TIRES

Size	Rim	Tire	Tube	Size	Rim	Tire	Tube
30x3	\$1.75	\$0.78		32x4-1/2	2.95	1.12	
30x3-1/2	1.75	.78		34x4-1/2	2.95	1.12	
32x4-1/2	2.95	1.12		36x5	3.35	1.40	
34x4-1/2	2.95	1.12		38x5	3.45	1.50	

HEAVY DUTY TRUCK TIRES

Size	Rim	Tire	Tube	Size	Rim	Tire	Tube
30x6 ply	\$3.85	\$1.95		34x7	\$9.65	\$3.20	
32x8 ply	6.95	2.65		36x8	9.70	3.80	
32x8 10 ply	7.95	2.65		40x8	12.35	4.05	

TRUCK AND BUS BALLOONS

Size	Rim	Tire	Tube	Size	Rim	Tire	Tube
6.00x20	\$3.10	\$1.80		8.25x20	\$7.45	\$4.80	
6.50x20	3.45	1.85		9.00x20	9.95	6.50	
7.00x20	4.75	1.85		9.50x20	10.95	7.45	
7.50x20	5.95	2.60		10.50x20	14.95	7.45	

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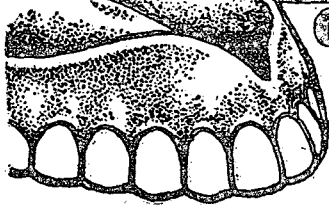
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THE MAGAZINE OF SCIENCE FICTION

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T. O'CONOR SLOANE, Ph.D., *Editor*

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Extravagant Fiction To-day Cold Fact To-morrow

Prophecy

By T. O'CONOR SLOANE, Ph.D.

WHEN one speaks of "Old Times" it is not a definite period that is referred to, any or all sorts of periods in the world's history may be meant. We have the steam engine and electricity in the most practical applications, and we think that the "ancients of days" had next to nothing in the way of practical science. But if this is conceded, and it must be, they did most remarkable things with little dependence on or use of mechanical powers. The erection of the pyramids of Egypt is a testimonial to the ability of the engineers of past ages. One of the suggestions of the way the great stones were raised to the upper reaches of the structures is, that earth was piled up as fast as the building progressed and that this gave an inclined plane up which the stones were dragged, presumably on rollers or on lubricated ways. Although this seems

a primitive way of solving the problem, it would show good engineering, for there was nothing else to be done than to use the inclined plane or some other as simple appliance to enable an army of men to draw the heavy stones up to the higher levels and eventually to the very top of the man-made mountain. But its height was less than half that of recent buildings in cities. For modern man does not go out into the desert to erect such monumental structures. When he does build them, about double the height of the pyramids, he does it with a view of having a hollow structure which can house a number of rooms. This is the idea of the high office building. If an attempt were made to reach the height of the Empire State structure using stone only, there would be little or no room in the lower stories. The lower stories would be masses of stone and mortar. There could be no thought of rooms

there. Steel makes the tall office building possible.

Another real triumph of old times is the monolithic obelisks; made by hand in the most primitive way they are testimonials to the artisans of past times.

The Incas of South America and the Mayas of Mexico reveal equal ingenuity in their structures of which unfortunately only ruins are left—How far back we can go in the history of the world no one can tell. Even the highly wrought poems of Homer are assigned to a number of centuries before the Christian era. Everything in them is most exact. In our days we may write, if we are inclined that way, in what is by a stretch of the imagination, called *vers libres*—free verses, but there was no such indulgence for the poets of what we are addicted to calling primitive times. A line of Greek or Latin poetry was like a problem in algebra. If instead of going back in our researches to a period three thousand years ago, we could penetrate into the really remote past, we might be astonished at the culture of remote times.

The people of former ages were addicted to superstition and that tendency has never left us. There are any number of people who are to all intents and purposes as superstitious as the most ancient races of whom we have adequate records. In former days, soothsayers would examine the entrails of slain animals to tell whether good or bad fortune waited on their people. The flight of birds was watched and the fortune tellers, and even those we may call the laity, would interpret the flight as giving good or bad augury. They used to consult the oracles in the shrines dedicated to the different divinities and get from the priestesses there messages sup-

posed to tell them of the future. Some of these have come down to our time. They are so worded that whatever happened there was always an interpretation which would be true and correspond to the event as it actually happened. They were ambiguous.

These are merely examples of the absurdities indulged in during those distant eras. But the strange thing about it is that we are just about as foolish in our beliefs as the ancient world was. We cannot safely say too much about our freedom from such superstitions. Over and over again the newspapers publish statements of what the stars say. Of course they really say nothing.

The planets are far enough from us to be innocuous as long as they keep in their orbits. When on the side of the sun most distant from us, our distance from the sun is to be added to theirs to give the extent of space between us and the planet. In the case of Jupiter, the radius-vector of his orbit may be taken as approximately 483 million miles; when on the same side of the sun as we are he will be, when nearest, at a distance of about 390 million miles from us. Then when we and the same planet are on opposite sides of the sun, it will be about 560 million miles away. Yet our earth goes placidly on its way, and we know nothing about changes in gravitation, as we go about on the surface of our globe. The same condition of things applies to the other planets which are harnessed to the sun, as it may be expressed. They are constantly changing their distance from us, but we know nothing about it. We have to go to the astronomers to be told what is taking place.

We know that the planets affect our personal gravity in theory at least, yet as we move about on the surface of

terra firma we know nothing about these changes. The pull upon the earth from all the planets varies every minute, but we know nothing about it from our bodily sensations. And we are told by fortune-tellers and astrologers that the positions of the stars and planets disclose to us our futures.

The distances of the planets from the earth are expressed in miles, for as astronomical distances go the planets are rather near neighbors. The distance of the nearest star in miles is approximately 25×10^6 miles. That is twenty-five millions of millions of miles from the earth omitting consideration of fractions. The light-year is about one quarter of the above figure, about six millions of millions of miles, and the stars are so remote that their distances as far as ascertained are stated in light-years. When we look at the nearest of the stars we see it by light which left it over four years ago. And this, the nearest of the stars, is at that prodigious distance from us. The Chicago exposition was started by the light from a star, Arcturus, which light had started on its course to the earth some forty years ago. And there are myriads of stars farther off than Arcturus.

FOR many centuries there have been those who believed in astrology. The curious thing about it is that people supposedly of high intelligence had faith in it. We find it easy to suppose that thousands of years ago the flight of birds, the condition of the entrails of animals, and similar things were held to reveal the future. It is fair to say that many years have passed since the world, or many in it, accepted the divination and prognostications based on such absolutely irrelevant things, but we are told that

within a few centuries the most intelligent persons were believers in astrology. It cannot be said that the world has grown wiser in this regard, for today there are many astrologers in the world, who practice the deceptive way of making a living out of human credulity. The daily papers publish in many instances day after day, little articles on "What the Stars Say." These articles tell what you may expect in the progress of events day by day. And there must be many who believe in the predictions. The signs of the zodiac are called upon to give the basis or data for prophesy.

These signs are a metaphorical or poetical way of designating divisions of the zodiac, which is the arc or path traversed by the sun in the year. The names are purely fanciful, they are the ancient titles bestowed on the constellations, and of course in such designations there is nothing scientific. If astronomy were being made over again there is no probability that we would ever hear of the fanciful designations of the fractional parts of the path followed by the sun, if it may be termed a path, from the time when it is at its maximum angular distance below the equator until it goes to the north and to its maximum angular distance above the equator, and brings us summer. When directly on the equator the days are equal in length to the nights, which gives the term Equinox, "Equal Night," the day and the night being each twelve hours in length for a period literally of a day and a night. So the astrologers appeal to this purely natural sequence of the obliquity of the earth's axis, referred to the plane of its elliptical path, to tell what the course of events in this troubled world of ours is to be. It would sound less impressive if the position of the sun at midday were re-

ferred to degrees and fractions thereof above or below the equator.

As a part of the prediction the reader is sometimes told what sort of a person the child born on the day of publication of the newspaper will be. There is one interesting sequence of this prediction. There are approximately three hundred and sixty-five and a quarter days, in the entire solar year, so carrying out the statement to its logical conclusion, there would be only some three hundred and sixty-five kinds of people born in a year, if we disregard the fraction taken care of in leap year.

It is hard to believe that readers of the daily papers give credence to the astrological predictions. But they can only be inserted in the daily journals for the purpose of increasing sales. The publishers must believe that devotees of astrology are numerous enough to make it profitable to print in their columns assertions of "what the stars say." There is inconsistency in the name used so much, which attributes to the stars the prediction of what is to happen in the future. As far as we know the stars at their inconceivably great distances do not say anything to us. If their positions tell us anything it would be of what happened years ago. No star gives us light from its present position or epoch. The nearest of them is seen by light which left it over four years ago. And in the cosmic sense that space of time may be taken as a short period. Other stars emit light which travelling as light always does, at the rate of one hundred and eighty-six thousand miles to the second, requires in many cases a period of time far greater than the life-time of a man to affect our eyes.

The universe of planets and stars is bound together by natural forces.

The force of gravity affects the natural relations and influences of planets and stars on each other. The temperature of the earth is maintained almost entirely by the sun. Disturbances in the sun may be taken as affecting climatic conditions on the earth. Great openings in the sun's incandescent envelope, producing sunspots, must have some effect on our sphere, but what it is remains to be further investigated. The planets have their influence on the earth in minute gravitational effects, minute as compared to the action of the sun in holding us in our orbit, and minute when compared to the gravitation of the earth on all things upon or near to its surface. What is referred to is in the domain of natural forces of which only two are taken here, gravitation and light, as illustrative of the influence of the stars and planets upon all things on the earth. Our knowledge of such factors as instanced above is told to us as the results of scientific investigation of absolutely natural phenomena.

All this is very clear, especially it is clear that there remains a great deal for us to know about cosmic actions. But believers in astrology fail to grasp the idea that the distinction between the forces of nature are unaffected by the actions of mankind, and have no effect on them and no control of human affairs. Changes of temperature affect the wearing of clothes of varying thicknesses. Rain may cause umbrellas to appear on the streets, but these are not cosmic effects. Gravitation, temperature and light are the principal things affected by the sun and moon in great part. But to concede that the planets affect the prices of stocks or the carrying of umbrellas directly is false. Astrology is so fictitious that it is a matter for astonishment that it has so many votaries.

Death in the Stratosphere

Our readers will enjoy going to the stratosphere, which may justly be termed a cosmic mystery. Strange things have been told about it by scientists and here the author gives free range to his imagination.

By HENRY J. KOSTKOS

THE ground crew at the landing field of the Inter-Continental Air Service, Ltd., on Long Island looked up and after one awe-stricken glance they began to run for the nearest hangar. For directly above them, at an elevation of about twelve thousand feet a large silver stratoplane was plunging down toward the earth in what might have been taken for a power dive were it not for the fact that the ship was spinning on its vertical axis like a high speed twist drill boring into some soft substance.

"Call the ambulance and fire crew!" Dacy shouted breathlessly to a mechanic. "She's going to crash! Looks like Atwell's plane coming in from Paris—Hurry, you fool!" he roared at the mechanic who stood transfixed with horror as he watched.

The wail of a siren rent the air as the emergency crew responded with an ambulance and fire trucks. From the comparative safety of a hangar Airport Superintendent J. R. Dacy and his men watched the "ICA-1" plunge with sickening speed toward inevitable destruction.

"Look! He's caught her!" one of the men shouted.

The plane, after dropping to within a half mile of the earth suddenly came out of the dive with a sharp swerve of its bow. The ship fluttered uncertainly like a falling leaf in

swirling air currents. It shuddered as if with horror at the thought of what it had gone through in the short seconds that had just passed, and circling round and round struck the ground with its landing-gear which crumpled under the impact.

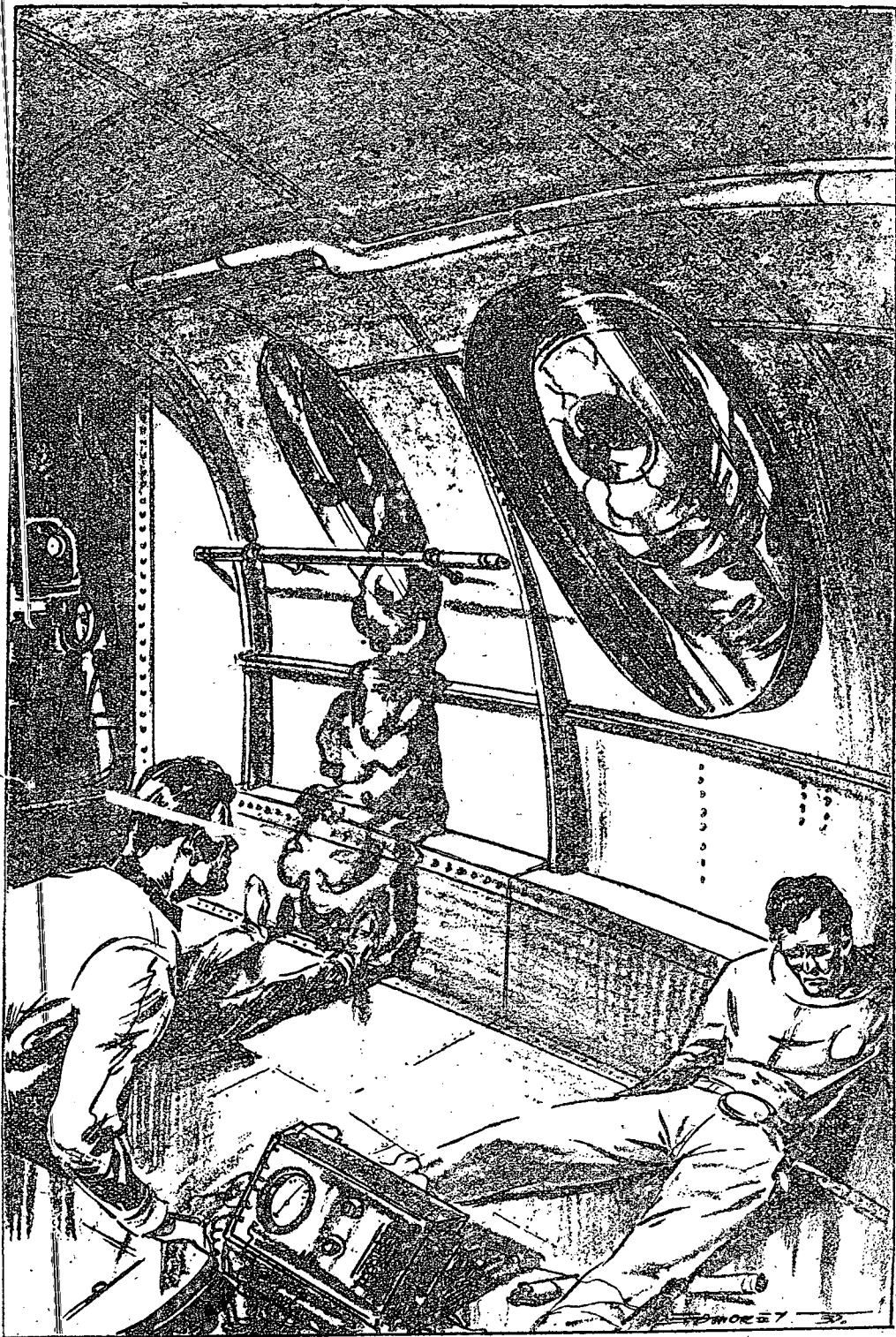
When the emergency crew and Dacy reached the "ICA-1" it was lying on its side like a great wounded bird, one wing buried in the ground, the other pointing significantly into the element from which the plane had just fallen.

The men tore open the door, a task made easy since it was battered and twisted out of shape.

"My God!" Dacy exclaimed as he peered into the luxuriously furnished cabin. "It's empty! Look, no one in there!"

Hurriedly he climbed up, then made for the control room.

He focused his eyes on the chair that should have been occupied by Captain Roger Atwell, crack pilot of the Inter-Continental Air Service lines. It required some moments before he could believe the evidence of his senses. He swiveled his massive head on a tree-trunk of a neck as his astonished eyes swept to the positions normally occupied by the first officer, by the navigator, by the radio operator. Finally the voice of a mechanic confirmed what had been an all-too slowly forming conviction in Dacy's



Involuntarily Douglas looked toward the window and his body jerked spasmodically. Pressed against the thick glass was a huge eye, fully a yard in diameter.

mind: "There's no one in here! The ship flew in by itself."

Dacy nodded an uncertain nod, then forcing himself out of his bewilderment Dacy asked in a hollow voice that sounded like the mere vestige of the loud, angry sound that usually issued from his lips when he spoke: "Have you searched all compartments?"

"Yes," a man replied. "We found nothing."

Then Dacy's eyes peered into the far corner of the cabin. Hurrying over, he stooped to examine what proved to be a heap of human bones, picked clean of flesh, yet coated with a thin layer of a slimy substance. Gingerly he poked around among the bones and the shreds of clothing. His hand found something that he hurriedly thrust into his pocket.

"We'll have to search these remains more carefully to find out who this was," he said to his master mechanic. The master mechanic, Sanford, had been looking over the controls.

"Just as I thought, Mr. Dacy," he exclaimed. "They've set the ship for automatic flying, with this field as the final destination. . . ."

"They?" Dacy asked. "Whom do you mean by they?"

Sanford looked up sharply. "Why Atwell and his officers, of course. Who else could have done it?"

"Then where are they now? How did they leave the ship? What happened to—that in the coner? Who—?"

Dacy's further questions were interrupted by a shout from outside.

"Mr. Dacy! Mr. Sanford! Look at what we've found!"

AS the two climbed out of the ship the men pointed to the landing gear braces. Clinging to the ironwork

were ribbons of bright colored gelatine that quivered and writhed as if alive. Gingerly Sanford touched one, then recoiled as a shred of the substance stiffened and with a lightning-like dart reached toward him. The watching men laughed nervously, but none made any move to step forward. The whiteness of Sanford's face was replaced by a deep red, as he became aware of the significance of the laugh. He wasn't going to be humiliated before his men, even if they themselves lacked the guts to investigate. Undoubtedly, he reasoned, the plane had been forced down, so that it had dragged its landing gear through the water out there in the broad reaches of the Atlantic and had ploughed up a giant jellyfish. Shucks, what was there to be afraid of anyway?

Sanford boldly stepped up to the landing gear and with the forced, jerky motion of an automaton, his hand shot out and grasped the largest shred of quivering gelatine. So quickly that the human eye could not follow it, the ribbon wound around the man's arm. And no longer was it vari-colored, but it had become a deep angry purple, pulsating, living, and with the power of a huge torsion device it bit deeply into the flesh of the forearm until the cold purple mass became dyed with the warm red blood of the man. What might have been a cry of horror was strangled in Sanford's throat even as Dacy leaped to life and with a wrecking bar snatched from a mechanic's hand he dug furiously at the crushing gelatine. With the moan of a man who is weary beyond words, Sanford crumpled up in a heap, with only his right arm, its red-dyed mass of horror wrapped tightly around it, extended imploringly.

"Help me, you fellows," Dacy

gasped. Then seeing the ambulance surgeon hurrying toward him, he said: "Never mind, here comes Dr. Lewis."

The young doctor, attempting a nonchalance he was far from feeling, reached toward the mutilated arm.

"Don't touch it!" Dacy warned. "That stuff's alive."

In a few jerky and almost incoherent sentences he explained their findings while the doctor applied a stethoscope to Sanford's heart. The man's face had by now turned a deep shade of purple as if to match the color of the horrible substance that was responsible for his suffering.

"His heart beat is very, very slow, as if he was being strangled," said the doctor. "I'll give him a hypodermic and then we'll have to rush him to the hospital. I'm afraid that I'll have to amputate his arm," he added, keeping his eyes fixed with awed fascination on the quivering gelatine that had by now squeezed the flesh from the bones as if it were soft putty. "I won't want to do anything here without proper equipment," he explained apologetically yet knowing all the while that he most certainly feared to come into contact with the purple mass on the man's arm.

When Sanford had been carried away Dacy directed his men to bring the oxyhydrogen blowpipe equipment from the shops. Then taking the nozzle, he savagely directed the searing flame at the remaining ribbons of gelatine. When the flame struck the substance the shreds sizzled as if in agony and great drops of viscous fluid oozed from it.

Even in its fluid form the substance seemed to cling tenaciously to life; it bubbled angrily on the ground for a full minute then subsided into an

oily pool that was gradually absorbed by the dry soil of the landing field.

Sanford never came out of the ether following the amputation. For a while there had been hope. His heart had become stronger, almost normal in fact, but suddenly it faltered and then stopped entirely. The doctors said that he had really died of fright from the effects of the shock of having the living mass of purple slowly squeeze the flesh from his bones like some medieval torture instrument. The amputated arm was placed in a refrigerated cabinet, and doctors and scientists from near and far came to observe it and attempt to determine the composition of the gelatinous mass. Most of them agreed that it was organic, although some maintained that it might be purely chemical—an unknown chemical that had a peculiar, devilish affinity for flesh. Samples carefully cut from the mass were analyzed. The scientists proved beyond question that the substance was protoplasmic and cellular in structure and origin and that it was still very much alive. Yet it did not continue to grow. For want of a more accurate classification, the scientists agreed with Sanford's conviction that the "ICA-1" had torn into the body of some huge sea monster, a jellyfish of an unknown species.

Still, that did not explain the presence of the mangled skeleton or the disappearance of the officers, the crew and the fifty-nine passengers of the stratoplane. Of course, as in the case of all mysteries, there were countless speculations by experts and laymen alike, by the sensational press and even by the staid scientific journals. Their solutions ranged from cold, clear, unconvincing logic to pink-fringed fantasy that melted away into vapor at the first suspicion of

serious consideration. All in all no one was satisfied by anyone else's explanation and in time the disappearance was relegated by the public to the limbo of inexplicable mysteries.

THEN, two months later when crusty old Scovill Delray, president of Inter-Continental Air Service, Ltd., no longer felt it obligatory to ease himself by continuous blasphemy of the effect of the loss of the "ICA-1's" passengers, a call on his private radiophone from his Long Island airport started him off on a fresh stream of vituperation that continued uninterruptedly for fifteen minutes. His secretary who had been taking dictation mumbled some incoherent words and fled from the office, neglecting, in her haste, to close the door. The over-ripe language flowed out into the outer office, effectively silencing the clerks and stenographers either through awe or because they were fascinated into speechlessness by the picturesque expressions that would have been the envy of the most abusive longshoreman.

Buzzers in private offices began to croak as Delray slapped his huge paw of a hand down on an entire row of buttons. Soon an influx of frightened faces filled the large office of the president.

"Sit down, sit down, dang your hides, instead of standing and gaping at me as if I had hydrophobia!" he roared. "I want action, blank blank it! Action!" He brought his hand down hard on his desk, toppling to the floor the ornate desk set that had been presented to him by the Flying Club for blazing new trails, when he had inaugurated commercial stratosphere service four years ago. Delray reached down to retrieve the set and

when he came up, in spite of his flushed face, he was calm. Scovill Delray was like that. One moment a stormy petrel, the next a tower of frozen business acumen, unemotional, calculating and courageous. And in spite of his blasphemous tongue his associates and employees all swore by S. D., even while he was busily engaged in swearing at them.

"What happened, Mr. Delray?" Vice-President Thorndyke asked.

"Every blank thing. Here, just as we got through putting the quietus on the loss of the ICA-1's crew and passengers, it's got to come up into the lime-light again. It's unfair, gentlemen, dang dang it." And there followed another torrent of mono- and polysyllabic expletives that left him exhausted and purple-faced. His staff knew from past experience that the proper procedure was for them to remain silent and wait for S. D. to resume speaking. He did.

"Look," he tapped a powerful index finger on a palm that had not yet lost the roughness acquired in his early machinist days, "we have been flying the stratosphere for years without mishap. Our ships are the safest dang things that ever flew, crawled or wriggled over this old planet. Then all of a sudden Number 1 comes in "flying auto", minus crew and passengers. And now—" he paused to gulp a glass of water—"now I get a call from Dacy at the airport and what do you think he tells me?" He looked around, then seeing nothing but bewildered expressions and negative head-shakings, he rose from his chair and punctuating each word with a blow on his desk with his hammer-like fists, he burst out: "Number 7 left London at nine o'clock

* "Flying Auto" is when an airplane is left to its own guidance without the pilot touching the controls.

Greenwich time this morning. That means she should have landed here nine o'clock our time. It is now two-thirty and still there is no sign of her. When Dacy first called me I had him send out a search ship and also ordered one dispatched from London." He paused a moment, and his voice became tinged with hopelessness. "But I didn't expect them to find Number 7" and shaking his head slowly as if to confirm his statement, he repeated, "No, she is lost without a trace."

The vice-president remarked soothingly, "But, Mr. Delray, our ships will float at sea for an indefinite period—"

"Umm, I'm perfectly aware of that, Thorndyke," said S. D. "Number 7 would float if she had the chance. But she never touched the sea, she was carried by some unknown agency high up into the stratosphere, somewhere," and not heeding the gasps of astonishment and the looks of incredulity he snatched up a radiogram and waved it at his staff and continued: "Listen to this. It is the last message from Number 7 before we lost contact with her:

"... flying at 32 miles above sea level send help rainbow horror the ship is being crushed by carrying us away Mr. Delray, Maureen says"

As he read the last words Delray's voice trembled with an emotion that few of his staff had suspected him of being capable of. He laid the message down very slowly, as if reluctant to relinquish this last contact with the ill-fated ship.

A confused babble of voices began asking questions. The president of the company waved his hand to silence them and said: "You know as much as I do at the present time. But

I'm finding out more. I'm going out there and by God I'll stay until I know what has happened! There is something out there in the stratosphere, gentlemen, something devilish. We must find and destroy it so that we shall not have a repetition of these unexplainable disappearances. Carlisle is piloting me, and Dacy will take care of the motors. There will be us three only. Thorndyke, you will remain in charge here. Keep in touch with me by radiophone—and no one is to know about my leaving; hear me?" He looked around at the group and repeated: "No one."

"But, Mr. Delray," Thorndyke objected, "it might be a decidedly dangerous undertaking. Why risk yourself? Any of us would gladly go in your place." The others nodded their agreement.

"Thank you, boys," Delray said. "Under ordinary circumstances that might work out. But now I must go. I can't stand the suspense of waiting My daughter, Maureen, was on No. 7."

COMMANDER DOUGLAS CARLISLE bent with a preoccupied air over the charts in the control cabin of the "Stratosphere Scout" the smallest of the fleet of the Inter-Continental Air Service, Ltd. He had set the automatic controls and the ship was now circling in an ever-widening spiral in the region where No. 7 had been last heard from.

Douglas' strong young features had become lined with the tell-tale signs of worry that he tried hard to shake off. Weren't they doing everything in their power to save the girl—if it were humanly possible? Yes, and even if it required superhuman effort he would still find her. But was Maureen Delray alive? That radio message

to her father indicated an unknown horror, something that in his twenty-six years of living Douglas had never encountered, a something for which there was no precedent, no accepted procedure.

Into his mind flashed images of the hours Maureen and he had spent together, flying high above the earth's atmosphere, where there was nothing but the dark purple of the outer world, nothing but a vast region of silence, that was rendered more acute by the purr of the impulsor tubes discharging gases at a tremendous pressure to move their ship in the partial vacuum. Then he remembered the time when he had driven this very ship up to an altitude of ninety miles where his instruments no longer registered and he did not know whether he was heading back toward earth or into the far reaches of outer space. The girl had seen the expression on his face although he had tried hard to keep her from knowing.

"I'm not afraid, Doug. Not when I'm here with you," she had said.

When she said this he forgot about flying, about the ship, about the danger they were in, remembering only that he was young, with the warm love of one who is young. He had taken her in his arms for the first time and she had been contented and happy there. If they returned safely to the earth, they had said, nothing would ever separate them. But now—

With a start he came out of his reverie to realize that Scovill Delray had been addressing him.

"I'm sorry, Mr. Delray. I was so absorbed—" he began.

"I know, boy, I know," the other replied soothingly. "You have checked the position?"

"Yes, we are at latitude 52, longitude 30 west. Dacy has been sitting

in the rear observation chamber, watching the sea through his glasses for the last two hours, but he hasn't seen a sign of wreckage or anything that might indicate that No. 7 had fallen into the water."

"Most of the wreckage would have sunk immediately," Delray mused, "but some would float. No, I'm more convinced than ever that she never struck the sea. Take the ship up into the stratosphere, up twenty, thirty, forty, a hundred miles, if you have to. Take her up!" he commanded.

Douglas released the automatic controls and nosed the plane up at an angle of forty degrees, keeping it in a wide circle so as not to lose their position. When the altimeter registered seven miles and the air became rarified Douglas energized two of the nine propulsion tubes to aid the ship in its climb. At twelve miles he turned on four more tubes and shut down the propeller motor. There wasn't enough air here for the screws to bite into. As the temperature outside was dropping steadily he turned on the heating system. The ship had already been made hermetically tight and the oxygen apparatus was functioning to furnish them with fresh air.

Dacy came into the control cabin after checking over the motors and compressors.

"How high are you going, Carlisle?" he asked in a voice that became tinged with alarm as he glanced at the instruments.

"I don't know. It all depends on what we find. As far up as we can go," Douglas replied shortly. He had become not a little annoyed at Dacy's apprehensive manner ever since they had set out on the flight. That the man was reluctant about coming was evident from the first. Douglas thought, "If I had been Mr. Delray I

wouldn't have insisted on his coming. A devil of a lot of good he would be in a pinch."

"But we can't fly very much higher," the man insisted. "We'll lose our bearings—the instruments won't register up there." His voice had become whining and an unhealthy pallor had spread over his heavy features. He moved his powerful frame with an uncertain, jerky motion of one who failed fully to co-ordinate his muscles with the impulses sent from his brain.

SCOVILL DELRAY turned abruptly from the observation window through which he had been looking.

"What the blank blankety blank are you beefing about now, Dacy?" he thundered. "I gave orders to take this ship up and she's going up as far as the moon if need be. If you don't like it you can bail out any time. Grab a space suit and a life preserver and jump. And if you continue objecting I won't ask you to jump!"

A crafty look came into Dacy's eyes. He had edged slowly toward the far end of the control cabin. Cautiously he opened the door, his eyes fastened upon the two men in the pilots' seats. Douglas did not like what he saw in Dacy's face and he began to rise. In a flash Dacy's hand darted into his jacket pocket and reappeared in a twinkling with a chromium plated gas pistol in its grasp.

"You're going to throw me out, are you?" he hissed, the blood rushing up from his massive, bull-like neck and displacing the whiteness of his face with an angry, blotchy red. "There's only one place I'm getting out and that's at an airport. And you're heading towards one now, Carlisle, understand? Get going!" he snarled, waving the gun menacingly.

Delray leaped from his seat and made for the man.

"Why, you blankety blank—" he began, but a swish of compressed gas from Dacy's gun cut him short. Delray doubled up, clutching his abdomen, his face turning a ghastly, greenish shade.

With a flick of his hand Douglas threw in the automatic control switch and making a mighty leap that covered the width of the cabin he landed on top of Dacy, knocking the gun from his grasp. Both men struck the hard floor with a thud. Douglas knew at once that he was no match for the man in a physical encounter—not if he was compelled to rely upon brute force. He had seen the man fell, with a single blow of his ham-like fist, a husky laborer at the airport who had refused to do his bidding. And he knew that once the other man got a secure hold upon him it would be the end of that fight. Therefore no sooner had he struck the floor than Douglas began to whip his wiry body around, threshing his arms and legs and swiveling his torso to keep Dacy from pinning him down.

Dacy drew back his arm and aimed a blow at Douglas' head, but so rapidly was the pilot moving that his opponent's fist flew past him and cracked against the hard floor. Dacy loosed a bellow of pain. Then the sheer animalism of the man took complete possession of him. Stripped was the veneer of human polish that had heretofore kept his savage instincts within control. He began to gouge at Douglas with his claw-like fingers, his lips drawn back baring two rows of large, uneven teeth.

Douglas succeeded in landing some heavy blows on the man's face which only served further to enrage him. Now one of Dacy's hands had found

Douglas' throat and, as the fingers tightened, the victim's struggles became more and more feeble. As the pressure on his throat increased, Douglas saw the evil red face of the man above become dim as if a heavy mist had gradually enveloped it. Then the mist became an opaque black substance punctuated by tiny pin points of fire through which he seemed to float farther and farther away from himself. Now deeply immersed in darkness, he sensed rather than heard a crunching and tearing sound, followed by the feeling of being shaken violently. With the last feeble spark of consciousness to aid him, Douglas shook himself and attempted to sit upright. To his surprise there was no hand at his throat to restrain him. His head seemed to swirl around as if it were being spun in a centrifuge, then the centrifuge slowed down and he was able to open his eyes.

NOT far from him, sprawled on the floor in the same position that he had fallen, was President Delray. Douglas thought that he could see the man's arm moving feebly, his fingers clasping and unclasping spasmodically. Then the pilot's eyes swept past the stricken president's form until they came to rest on something that crouched against the far end of the cabin, a something that moaned in terror. Now Douglas could see what it was. The giant form of Dacy, with his hands pressed over his eyes as if to shield from his sight something that he feared to look upon!

The first clear thought that swept away the confusion in Douglas' mind was that Dacy had indeed gone insane and was now jabbering the fears of a crazed mind. But that thought was dispelled when the crouching man re-

luctantly drew one of his hands from his face and looked with terror-stricken eyes toward the observation window. The cry that came from his throat was inhuman; it contained all the anguish that a fear-tortured mind could ever conceive in centuries of contact with untold horrors. Involuntarily Douglas looked toward the window and his body jerked spasmodically.

Pressed against the thick glass was a huge eye, fully a yard in diameter, pulsating with red and blue fires that seemed to consume it! And encasing the eye was an indefinable shape, a mass of irridescent, moving, writhing gelatine. The same substance as that which had clung to the landing gear of No. 1!

His gaze held and fascinated by the sight, Douglas rose slowly to his feet. Were it not for the crouching, terror-stricken man, Douglas would have believed that he had passed through a stage of unconsciousness that had left him delirious. He tore his gaze from the living eye and glanced at the instruments. The motors had stopped!

But he could feel movement, a gentle pitching as if the ship were riding on a sea of smooth, rounded swells. And glancing out of the window, on the side opposite to that where the horrible eye was pressed, he could see in the distance what appeared to be cloud formations. But that was unreasonable. Clouds up in the stratosphere? Never. It must be something else, or perhaps the ship had dropped back into the atmosphere. Or gone upward into a region unknown to man. There were all these possibilities, so many in fact that his head again began to reel.

Douglas bent over the body of President Delray and felt his heart. It was beating. Now unheeding of the

menace outside, he removed the first-aid cabinet from its holder and breaking an ampoule of aromatic spirits of ammonia, he held it under the man's nose. He noted with relief that the ghastly greenish pigmentation was being displaced by a more natural glow. Apparently Dacy's aim had not been very good, for had Delray received the full charge of the deadly gas in any portion of his body, his blood stream would have instantly frozen in his arteries. The thought of the maniacal airport-superintendent caused Douglas to glance quickly in the direction where the man had been huddling. The corner was empty. And the cabin door was wide open. Dacy had been able to subdue his fright sufficiently to make his way out and now he was somewhere in the main body of the ship.

Douglas laid Delray's head down and hurriedly closed and locked the door. He would deal with Dacy after. First there was S. D. and then the creature outside. A crumpled piece of paper caught his eye, lying near the gas pistol that Dacy had dropped. Douglas thrust the paper into his pocket. Then almost mechanically he picked up the pistol. Might have use for it, he reasoned, but of what avail would such a puny weapon be against a monster that was so enormous that its eye was almost as large as a man's body? He ventured a glance toward the window.

The eye was gone!

BUT something else had replaced it in the line of his vision: a mountain of dazzling colors looming up ahead, a mountain that had no definite shape but shifted its formation and coloring with the brilliance of a kaleidoscopic image. And toward this mountain the ship was moving

at an incredible pace. Heretofore, sailing through space with nothing tangible to afford an indication of relative movement, Douglas had not realized how swiftly the ship was being borne along by some unknown agency. Far faster, he now realized than any man-made ship had ever been hurled, even through the outer reaches of the stratosphere.

The mountain now appeared larger. Below the peak Douglas could make out a flat stretch of the same iridescent substance of which the mountain was composed. His attention was drawn from the scene outside by a low moan, and he abruptly realized that, with events tumbling on top of one another, he had forgotten about President Delray. The man pushed himself to a sitting position and was looking around in the bewildered manner of a person coming out of a nightmare.

Douglas hurried toward him.

"Where the blank blank are we?" were Delray's first words, uttered in a tone that began in an almost inaudible whisper but which swiftly rose in a crescendo to its former booming volume.

"I don't know, yet, S. D.," Douglas began, "but it won't be long before we find out. Look." He pointed out through the observation window and leaned down to assist the other man to rise. But Delray, disdaining the offer, jerked himself to his feet and stared out ahead.

"Holy jumping tarnations!" he cried, "I'm not seeing that am I?"

"You surely are, and so am I."

"What is it, a close-up of an aurora borealis?" Delray asked.

"Umm," Douglas mumbled. "That might not be such a crazy guess at that."

"Say, you blankety fool," the other shouted indignantly, "you're not calling me crazy by any chance? If I thought you were I'd pop you out through the window and let you do some space-walking."

Before he could formulate the proper words, Douglas' retort was cut short by a frenzied pounding at the control cabin door. A muffled voice reached them: "Let me in, for God's sake, let me in!"

"Dacy?" Delray asked.

Douglas nodded.

"All right," S. D. commanded, "you open the door. I want to go to work on that dash blank dashety blank."

"He might be armed," Douglas objected. "Wait, I'll see."

He strode across the room and pulling the gas pistol from his pocket threw open the door. The huddled form of Dacy stumbled across the steel sill plate. And the gloom of the cabin was alleviated by a phosphorescent streamer that lashed and churned around in there.

"That thing!" Dacy said in a fear impelled whisper. "It's alive."

President Delray had now risen to his feet, and after a single glance into the cabin, he dragged an emergency axe from the wall and made a dash for the door. Douglas leaped in front of him.

"Now you would be crazy to do that," he said severely as if he was chastising a child instead of speaking to the man who was his superior.

Bracing his hand across the doorway, Douglas managed to restrain Delray from carrying out his wild impulse. At the same time he pulled his gas pistol from his pocket and aimed it carefully at the rapidly moving tentacle. Realizing that his chance of making a direct hit on such

an uncertain target was very slim, he nevertheless pulled the trigger. Instantly some ten feet of the waving menace flashed out as rigid as a steel bar, shiveled into a mere vestige of its former self and dropped to the floor. Boldened by the success of their defense, the three stepped into the main cabin, then shrank back against the wall.

The part of the tentacle that they had severed was but an infinitesimal portion of the monster that filled the room; a huge, scintillating mass of gelatine that had oozed through the crushed glass of a port hole. It pulsed with the movements of a disembodied lung that was still breathing. The men looked out through the other ports. While at first glance the mass of the creature that filled the space without appeared to be so vast that they failed to define its shape, upon observation the lines of a huge snake, coiled around the ship, became apparent. Its head was at the position of the ship while its tail extended for at least a half mile beyond in space. A fringe of tentacles covered its body.

"Sweet spirit of tarnation!" Delray exclaimed, "it's carrying us along to the end of all creation."

"An air monster!" said Douglas. "How can such things exist up here where there is practically no atmosphere?"

"Don't know," Delray replied shortly. "I'm more concerned with how in blankety blank *we* can continue to exist. Just now I wouldn't bet on it even at sweepstakes odds—what was that. . . .?"

His question was prompted by a violent jar—that hurled the three to the floor then precipitated them hard against the side wall as the ship came to an abrupt stop.

RISING cautiously to their feet, the men stepped back into the control room and looked out through the observation window. Directly in front was a barrier, a mountain of rainbow colors, translucent as clear ice, yet emitting a warmth that dispelled any illusions about having landed at the base of an iceberg.

"The ship has been released," cried Douglas. "It's free."

The air serpent having deposited them in this strange world slowly withdrew its gelatinous mass from the cabin, uncoiled itself from the fuselage and with a mighty convulsion of its enormously long body, disappeared high up in space.

Now that the imminent danger from the creature was past, Dacy withdrew to one side of the control compartment and watched with narrow eyes the actions of Douglas and President Delray. These two were talking in low tones. He saw Delray nod to his pilot. The latter turned to Dacy and surveyed him as if he was seeing him for the first time and that view was decidedly unpleasant.

"Listen to me, Dacy," Douglas began, his voice like chilled steel, "there is something that you and I had better settle now without further delay. You've been confoundly nasty. More than that you've tried your utmost to get Mr. Delray and myself. Why you should act this way I don't exactly know and I haven't time to enter a guessing contest to decide. All we want to know is how you propose to behave in the future. We've landed somewhere. We don't know what there is out there and we don't know if we will ever return to earth. But while we are together we must pull together. There must be no disharmony in our group, do you understand that?"

Dacy avoided the man's steady gaze as he weaseled with: "I wasn't myself then. I don't know what came over me."

President Delray snorted his impatience. "I see there's no use of trying to make a man out of you, you sniveling coward. Now listen, Dacy—from now on, no matter what happens we're keeping a close watch on you. Any funny business and out you go like a dash-light. That's all." And he glared at the airport superintendent until the man shifted uneasily from one foot to another.

With Dacy subdued at least for the time being, Douglas and Delray now began to devote full attention to their position. It was apparent that the air within the ship had had ample opportunity to seep out through the broken port. Yet they found no difficulty in breathing. As a precaution against atmospheric conditions outside, they took oxygen masks from the rack in the cabin and moved toward the exit door. With his mask held in readiness to don instantly Douglas swung the door open. A mellow warmth pervaded the interior of the cabin, as if they had stepped from the damp chill of a butcher's refrigerator out into the spring sunshine.

They looked down. There appeared to be nothing solid, nothing tangible below, only a brilliant shimmer of luminous colors, ever changing. Douglas was immediately reminded of Delray's comparison of this phenomenon to the flashing of an aurora borealis. He even imagined that he could hear the crackling of the electrical discharges with which the northern lights are associated.

"Well, what are you waiting for?" Delray asked. "Jump down."

"Down where? I don't want to fall on top of the north pole."

"You won't. The plane is resting on that stuff isn't it? Watch this."

Delray took a jack-knife from his pocket and allowed it to drop. The knife struck the surface with a sharp crack and then bounced into the air almost a yard.

"I'll say it's solid," Douglas admitted, "and plenty resilient. More springy than rubber. Here goes."

He lowered himself from the cabin until his feet touched the ground. But as soon as he released his hand-hold his feet shot out from under and he came down with a thud.

DELRAY'S booming laughter echoed over the vast stillness. But Dacy, who had been nursing a sour expression ever since the ignominious treatment he had received, did not even smile. He stood back and permitted the president to climb out of the cabin, then with a clang that could have been heard a mile he slammed the trap door shut.

"Say, you blankety blank blank," Delray roared in the direction of the closed door. "Open that and come out or I'll come up and take you apart."

Dacy's taunting voice, muffled by the fuselage of the ship, came faintly to their ears: "If you know what's good for you you'll get going. Try anything and I'll blast both of you to smithereens. I'm taking this ship and going back to the earth. You two can pal with your air friends for the rest of your lives, which, according to my present view, is going to be mighty short."

Instinctively the two men looked up into the air. A cloud of flying creatures was coming rapidly toward them. Douglas pulled out his pistol, then realizing the futility of the gesture, he tucked it back into his pocket.

"I'll save that for later; use it as a last resort," he said grimly.

"Well, son," Delray declared, his chin squared and head held defiantly erect, "we'll at least take it like men, not like a jackal." He nodded in the direction of the man inside the ship.

By now the flying creatures were almost directly overhead, but at a still too great a distance for the men to make out their forms.

"I wonder if they have seen us?" Douglas remarked. "Or were they attracted by the ship? Let's make a dash for that crag over there where we can hide, there's no use in taking foolish chances. Dacy can stay to act as a reception committee."

While the creatures were circling downward, Douglas and president Delray shuffled across the smooth slippery surface as fast as they could. They fell at frequent intervals and made such slow progress that they despaired of ever gaining their refuge in time. Down out of the sky came the cloud. It lost its massed appearance and resolved itself into individual wriggling spirals, each one a living creature, appearing for all the world like *spirilla* bacteria viewed in the field of a gigantic microscope.

"Ugh, horrible," Delray spat in disgust. "A mass of stinking, slimy worms."

The men had now reached the hummock behind which they crouched for shelter. Horrified, yet fascinated by the sight, they followed the serpents' movements. There were literally hundreds of them, varying in size from ten feet in length to some that easily measured two hundred feet. All were composed of the same gelatinous substance as the huge air monster who had brought them there. And many of them were endowed with a fringe of tentacles.

"I've got it!" exclaimed Douglas. "Those are the young of the large reptiles. They are hatched here and are nourished by substances brought in by their parents, for there is probably nothing edible here. The ones with the fringes are apparently the males. What horrible creatures . . . Look! They are climbing over the ship!"

"Like a nest of worms," Delray said. "Do you suppose that these air monsters could have existed all these years without any trace of them having been found on earth?"

"Quite likely. They appear to be of a very primitive class of reptile. Perhaps it was during our Proterozoic Age, a thousand million years ago when plant life on earth existed only in the form of a green scum and algae, and our fauna was a teeming multitude of unicellular creatures, that a germ of life was carried to this place either from the earth or by the agency of meteors from some outer world. And as the process of evolution raised our single cell beings until they became huge dinosaurs and flying reptiles, so here they developed into those forms. If you remember, the earliest sealife were the jellyfish, the composition of whose bodies is much the same as that of these air-monsters."

"Pure dashed speculation," S. D. snorted. "Tell me then, what is this ground or world or whatever the dang we're on, composed of and how did it get here?"

"Not having a laboratory in my pocket, I can only resort to your despised, guessing methods, Chief. This stuff was probably compounded when the earth was a swirling mass of hot gases or through some tremendous volcanic activity and was hurled out into space but not far enough to fly

free of the earth's gravitational influence. So it is apparently a satellite of the earth, an unknown satellite."

"Do you mean to say that this transparent moon has been revolving around the earth without having been seen by our telescopes?" Delray asked.

"If it is where I believe it to be there is a very good chance of its remaining invisible," Douglas remarked. Then noting the puzzled expression on the other's face, he continued: "If we are somewhere above the north pole, for instance, unless at a tremendous altitude the curvature of the earth would cut off the line of vision from even our northernmost observatories; then in the second place, judging by the rapidly shifting, translucent colors, this world is a heavily charged Wimshurst machine, a huge static generator. And is it not reasonable to suppose that it causes a phenomenon not unlike the aurora borealis? Remember your first impression?" he asked. "Perhaps we are even now at the source of the northern lights!"

Delray nodded, his hesitating manner indicating that his barrier of incredulity was being slowly demolished.

All this while the two men had been watching the host of swarming air-snakes. Their wriggling bodies had by now entirely covered the stratosphere until not a single square inch of its metal surface was visible. Suddenly the layer of bodies appeared to converge into a funnel near the top of the fuselage. They had found the broken port hole and were crawling into the interior!

A shrill scream rent the stillness, a cry of untold agony.

"My God!" Douglas exclaimed.

"Dacy. Can't we do anything for him?"

Delray shook his head. "It's too late now, Doug. He should have come with us. What a horrible death."

"We can't go back to the ship and we can't stay here," Douglas reasoned after a moment's silence during which time he could not help dwelling upon Dacy's fate. "Let's follow that gorge down there. It seems to lead toward the mountain peak. At least it affords us a shelter from those monsters."

SLOWLY they made their way along the bottom of the ravine, keeping a vigilant glance skyward. But no living creature appeared. The ground under them maintained its scintillating color changes. In many places they trod over regions of pure transparency, regions where they could look deeply down through the substance to what might have been endless stretches of ice and snow. If they were above the north pole it was hard to explain the temperature. Even in the tropics, at an altitude of fifteen miles it was bitterly cold. And here in the upper reaches of the stratosphere it should have been near absolute zero. And the presence of air Whatever the explanation was, the two men were grateful that the mathematics of scientists were not always accurate in predicting unknown conditions.

After what must have been three hours of steady trudging on the frictionless surface where their feet constantly slipped out from under them, they reached the base of the mountain. Rising sheer above them for thousands of feet was a wall of glass that formed an effective barrier in front beyond which they could not pass.

It was at the time when the two despaired of finding some means of continuing their exploration that they discovered the valley. Following the wall of the mountain they climbed over a rise in the terrain that had shut off their view and saw below them a vast, level stretch. They slid down the rim of the crater which led into a natural bowl. Here the light was more glaring, owing to the reflection from a porcelain-white ground. And it was here, while they were stumbling along half blinded that they found it.

The bleached skeleton of a human being!

The bones had been picked clean. There was no trace of clothing, nothing but a signet ring with the initials "R. A."

"This is evidence that we're not the first human beings here," S. D. remarked in hushed tones. "I wonder if the others—Maureen" He left the thought unfinished. Douglas shuddered. It was too horrible to contemplate. He looked ahead. Why hadn't they seen it before? Some five hundred feet away there was what appeared at that distance to be a heap of débris. They hurried toward it.

"My God," Delray cried. "The remains of a seaplane. One of those old atmospheric models they used to take such awful chances with, about the time Lindbergh flew the Atlantic. It's been crushed to bits. Even the motor is in pieces. Here's something, Doug, look."

He held out a notebook which might have served as a log. They opened it. The entries were in Norwegian. On the first page they deciphered the date, June 18, 1928, and a signature, "Roald Amundsen."

"Amundsen!" Douglas said in an awed voice. "He and Rene Guilbaud

set out from Tromsö in search of Umberto Nobile, who had flown over the north pole in the balloon airship 'Italia'. The air monsters got him."

Although they searched the wreck there was no sign of the remains of Guilbaud. Silent and thoughtful since they had found this spectre from the past, the men continued along the floor of the crater.

There was plenty to think about—the fate of crew and passengers of No. 1 and No. 7—No. 7 with Maureen Delray aboard. If they should find them in the same condition as that poor man back there And even if they were alive how could they all get back to earth? No. 7 was evidently smashed beyond repair, otherwise it might have returned.

Suddenly Delray shouted: "There's something else," and he pointed to a white shape ahead. Hurrying toward it they made out another plane, this one apparently intact. The name in French stood out in bold letters. Douglas translated it.

"The 'White Bird', Nungesser and Coli's plane! One of the first to attempt the Atlantic crossing. Lost back in 1927, wasn't it?" Douglas asked.

"About that time," the other said. And after they had searched the machine in vain for remains of the aviators he asked hopefully, "do you think we can repair the plane?"

"I'm sure that we can, but it would do us but little good. You can't fly the stratosphere in a propeller airplane, you know."

"Dash blank it, no," Delray snorted. "My brain's getting as soft as a squash."

"Uh huh," Douglas agreed absently, then aware of the significance of the glare the other gave him, he con-

tinued hurriedly: "I meant that we can still use the plane for exploring this place. That's the only way we can see what is beyond that wall," he explained, pointing to the mountain. "And maybe we'll find—someone alive."

Douglas and S. D. quickly checked over the machine. Then turning on the ignition, Delray grasped the propeller blade and pulled down on it. There was an explosion as a cylinder fired. Elated by his success, he kept turning the motor over until it finally caught. Douglas in the cockpit adjusted the throttle, then when the other had climbed in alongside, they gave it the gun and they were off, taxiing over the smooth ground. Douglas' unfamiliarity with one of a model as old as this one was a serious obstacle. Time after time he tried to take off with negative results. When the last attempt resulted in a near disaster, Delray shouted above the roar of the motor: "Let me take her. I've flown some almost as old as this baby in my young days."

EITHER because of his skill or because of good fortune, Delray managed to get the plane into the air. Then circling around he began to climb.

From their elevation they could get a good view of the strange world they were in. It stretched for an indefinite distance until the structure of the land merged with the sky beyond. As far as they could see there was no living creature in sight. The fledgling air monsters had apparently gone back to their nest to await another consignment of provisions. The thought made Douglas shudder.

Now they had reached the top of the mountain wall. Beyond it was a terrain much the same in character

as that on their side. Coming down on the far side of the mountain, they became aware of a mass of clouds lying low on the horizon.

"That's queer," Delray remarked, "the first clouds we've seen up here. I wonder if it ever rains in this place?"

"Clouds?" Douglas who was free to look around was able to focus his eyes fully on them. "They're moving mighty fast—Wait! They're air monsters! And they've seen us. Go down!" he shouted.

Reacting to the command, Delray nosed the plane down at a dangerous angle, peering anxiously over the side for a landing place. The ground below was particularly unfavorable. Sharp crags and pinnacles thrust their needle-points upward to spear anything that would attempt to descend from the sky, and deep abysses yawned dismally to entrap them. Delray levelled the plane off and soared about. Swiftly the advance column of monsters darted toward them. If the men thought the group that had surrounded their stratoplane was large, then surely this flock surpassed all imagination. The sky became black with their wriggling, serpentine bodies.

"If we don't find a spot soon it will be too late to look further," Douglas urged—then: "How about over there between those two ridges? There's just about room enough to make it."

The place to where he pointed offered a precarious landing, a thousand to one shot. But it was their only hope and Delray cut off the motor and planed down. The right wing grazed the ridge, then fortunately before the plane was thrown off balance the other wing caught on the far side, and the "White Bird," after scouring the sides of the trough, remained

wedged firmly. The men hurriedly climbed out and dropped to the ground, then ran toward an overhanging rock that seemed to offer some refuge from an overhead attack. When they reached it they discovered that it was an archway leading into an abyss. Behind them they could now hear the slithering sound caused by many bodies rubbing together as the avid horde bore down upon them. It would be only a matter of moments before the end, before the horrible monsters crushed them under the weight of their slimy bodies.

Douglas wheeled around, pulling his gas pistol. Not fifty feet away one of the creatures had swooped toward him. He fired. The long serpentine body became as rigid as steel, then fell lifeless to the ground.

Plunging through the archway they looked down into the crevasse. There a hundred feet below them, was Inter-Continental's stratoplane No. 7, the ship that had been lost!

"My God!" muttered Delray, "my God!"

In one glance Douglas took in the situation. The side of the crevasse slooped down precipitously. They could never evade the air snakes and reach the refuge of the ship if they attempted to climb down.

There was but one way.

"The sides are smooth. Take it on the run and slide down," Douglas shouted. "I'll follow. Hurry," he urged.

Through the archway crowded the slimy monsters. So massed were they in their eagerness to get at these morsels of food that they had become wedged in the opening. But the leaders were already wriggling through.

Delray hit the slide feet first, and down he went. Pausing to fire several shots into the writhing bodies, Doug-

las followed. He landed in a heap at the bottom. The plane was a good hundred feet away. He began to rise to his feet, then sank back with a groan. His leg seemed to be broken.

"Go ahead, Chief," he urged. "You make it. I've got enough charges left in this gun to keep them at bay for a while."

"What the blankety blank do you take me for, you young squirt. Here, hold on." And bending down he lifted Douglas to his massive shoulders and started in the direction of the ship. Douglas looked toward the strato-plane. No sign of life there. It was hardly reasonable to suppose that anyone would be left—not with the sea monsters around. He looked down to the ground, then turned his eyes away. Bits of clothing and human bones, remains of the crew and passengers, were strewn about.

BURDENED with the weight of Douglas' body, Delray found it hard going. The frictionless surface offered a precarious footing and he was forced to tread carefully to maintain his balance. If they reached the ship, would they be able to open the door? Every entrance seemed to be tightly closed. And even if they did gain the relative security of the interior, how long would it be before the great horde of air creatures would crush the plane under the weight of their massed bodies? Fifteen feet from the plane Delray slipped and fell heavily to his knees, precipitating Douglas' body to the ground. With a hiss the air monsters swooped down on them. Douglas rolled over and fired his pistol into them. A number fell to the ground, but there was no perceptible gap in their ranks. He fired again and again, but still they came on. Now one of

them was within ten feet. It would not be long—

Even as Douglas raised his arms to shield his face from what he knew was to come, the creature overhead stiffened and tumbled to the ground almost on top of him. Then another, and another. Douglas looked toward Delray, then seeing that the man possessed no weapon, he turned toward the strato-plane. The door had been opened, and firing from it with a magazine gas rifle, was Maureen!

"Hurry, hurry, please!" she implored, never relaxing her firing.

Delray was on his feet, and once again lifting Douglas to his shoulder, covered the distance in a few moments. They pushed through the door and clanged it shut.

"Where are the others?" were Delray's first words after he had embraced his daughter.

"Out—out there," she made a vague motion with her arm. "It was horrible."

"Don't think about it, please," Douglas implored. "Thank God that you are here."

"Listen!" Maureen said.

Outside, the rain of bodies beat like hailstones against the shell of the plane. The plates began to creak with the weight heaped upon them. The ship could not long resist this tremendous pressure.

"How is it they had not attacked you before?" Douglas asked.

"But they did," the girl said. "The day we were brought here. They crushed through the after door and dragged everyone out—the crew and passengers. The chief pilot unbolted the cover of the combustion chamber and had me crawl in—just before they got him. I guess they could not smell me out. I stayed there, for days it seems, while the horrible things

swarmed all over the place. I must have been unconscious, too, for a long time. Overcome by that gas they exude. When I came to, I found that they were gone. But I almost died of fright, the fear of being alone, the fear of another attack. Oh—" and she sobbed in Douglas' arms.

"How about the after-door now, Maureen?" her father asked.

"I sealed it. The only way they can get in is by breaking it down again."

From the crunching of the plates it was evident that this contingency would not be long coming. Douglas looked questioningly at Delray.

"Can't we blast our way out? The tubes seem to be intact," he said.

"We'll try it," Delray replied, "especially since the ship's wedged in so we can't use the atmosphere motors and the propellers."

With that S. D. hurried back into the engine compartment and began opening valves and preparing the propulsion tubes for the unusual service of taking off. These tubes were normally employed in the stratosphere only, where the reaction of the gas discharged at high velocities served to propel the stratoplane. On his way aft he discovered that the door his daughter had bolted back into place was far from being airtight. But fortunately the compartment in which it was located could be shut off from the rest of the ship by bulkhead doors which he now closed tightly.

ALONE in the control room with the girl, Douglas took her in his arms for a long embrace, then sat down in the pilot's seat and grasped the starting switch.

"Strap yourself into the seat next to me, Maureen. It's going to be a rough start," and under his breath

he added, "if we make it." Then into the speaker leading to the engine room he asked: "Ready, S. D.?"

Delray's booming voice came back: "All set. Give her the gun, but try her on two tubes first, son," he cautioned.

Douglas threw the main switch, then grasping the directional lever, quickly operated two buttons. There was a roar that reverberated through the vast silence, a thundering that seemed to shake the very mountain. But the stratoplane, after some convulsive trembling, became wedged only more deeply in the crevasse.

"Cut!" came Delray's voice from the speaker, "or you'll bury her in the wall of this cursed canyon. Try—" he stopped, his tone changing from one of exasperation to that tinged with alarm. Douglas knew instinctively that the other must be exercising the greatest amount of self-control. Then Delray called: "Douglas, come here, quick! Have Maureen remain."

The girl looked at him, her face growing white. Then, as if angry at herself for permitting this sign of weakness, she said: "Go, Doug. I'll stay. If I can help, call me."

Douglas did not trust himself to speak, but gave the girl a glance that transcended mere words. He had heard the pounding of the monsters' bodies as if they were very close indeed. No. 7 was sturdily constructed as compared with his "Stratosphere Scout," but even this ship could not withstand their impact. And something must have happened so to alarm Maureen's father.

He closed the door of the control chamber and began running aft through the main cabin. At the other end he met Delray.

"Douglas, my boy, they're in. Broke

down that damaged after-door. They're still in the small compartment, but the bulkhead is giving. I'll show you."

One glance at the straining plates was enough. Through Douglas' mind ran a thousand and one flashes, all of which failed to materialize into anything helpful. Their gas rifles and pistols would be like toys against the vast hordes that were attacking them, seeking the flesh and the blood with which to nourish themselves while growing into those terrifying half-mile long creatures that had been preying on aviators for God knows how long. Before him marched the names of the vanished, while he was trying hard to think of a solution: Nungesser and Coli; the "Old Glory" with Hill, Bertand and Payne; the "Sir John Carling" with Capt. Tully and Lieut. Medcalf; the "St. Raphael" with Capt. Hamilton, Col. Minchin and Princess Löwenstein-Wirtheim and—

"I've got it!" Douglas burst out suddenly. "Remember when No. 1 came in with those living shreds from one of these monster's bodies on its landing gear? The only thing that was effective was a blow torch. We've got two tanks of that new chemical fire in the control room for emergency welding. I'll get them."

He rushed back with the tanks under his arms, quickly adjusted the nozzles and handing one to Delray, said: "I'll open the door, and when I do, you let them have it. Then I'll grab the other tank. If this doesn't clean them out—" Then he stopped and looked at the other man and in a voice that had suddenly lost its ring of confidence he said, "I—I don't know, Chief. It's a terrible risk. . . ."

"No, Douglas," Maureen's words came from the gloom of the cabin,

"it's the only sensible thing to do. Hurry, I'll take the other tank while you open the door. Better to go under trying than doing nothing."

MAKING sure that the nozzles were ready to be ignited, Douglas unbolted the door and standing to one side, threw it open.

Immediately a long, slimy head thrust itself through the opening.

"Let them have it!" Douglas shouted and the liquid fire roared into flame. The stream of incandescent gas seared into the ugly head of the monster and at once its substance ran like putrid oil back into the outer compartment. Immediately other heads and bodies appeared, but as the fire of death struck them, they too dissolved into a fluid that spluttered with venomous intensity. The odor of burning bodies was mixed with the anesthetic gases exuded by the living serpents. Douglas snatched the tank from Maureen's hands and shouted: "Get masks, quickly!"

The girl returned not a moment too soon. By now the outer compartment, which had been teeming with the air monsters was clear except for the oily liquid that flowed in a stream out to the ground.

"We'll have to eliminate all of them, Douglas, while we can," Delray cried. "Come on." And he pushed out through the outer compartment and directed the fiery vapor toward the reptiles that were writhing on the ground. Luckily for Delray he had not stepped out of the ship, for as soon as the tongue of flame seared through the bodies and touched the ground a flash of hot gas shot up into the air. And in a twinkling the entire ground was blanketed by a wild blue flame and incandescent vapor.

Delray, blinded by the intensive

flame, leaped backwards and landed in a heap on the floor, the tank falling from his grasp and rolling out through the door of the ship.

Douglas dragged the inert form of the man inside and clanged the compartment door shut. Both Maureen and he were gasping for breath, for the astringent gas had penetrated through their masks.

"Look!" Maureen cried, "their whole world is on fire!"

Out through the port hole they could see the flames creeping over the ground faster than the eye could follow.

The air monsters were in a seething mass, their body substance flashing into fluid that in another instant became nothing more than a heavy, oily vapor.

The heat inside became almost intolerable. Suddenly the ship gave a lurch and sank lower as the supporting ground under it was consumed by flames.

"Maureen," Douglas called. "I believe that we are free. Will you take care of your dad, and hold on tightly? I'm going to try the projector motors."

Back in the control room he quickly switched on the power and then threw five tubes into service. With a jar that almost tore him from his safety straps the ship leaped from the surface that was now soft and gaseous. Straight up into the air it pointed, almost causing it to go into a tail spin, until Douglas, working his controls frantically, levelled it off.

Maureen and her father came into the cabin. The man was unhurt. They looked below and saw a world as it must have appeared when it was a swirling mass of hot gases, before it had begun to congeal into a solid substance. The flames had reached

even the highest peak of the mountain that the travellers had flown over only a short while ago.

SEVERAL days later President Delray was working in his office and the door opened to admit his daughter and Douglas Carlisle.

"Ah, you young scamps, it's about time you showed up," he boomed. "Where have you been?"

"Getting acquainted with each other all over again," Maureen said, "and buying a wedding gown and charging it to your account," she added.

Delray smiled at his daughter affectionately, then turned to Douglas. "There's no question any longer of the stratosphere and the air-lanes being free of danger from air monsters. That's cleared up, even if the papers still continue to make a seven day wonder of it. But there is one thing that is just as much of a mystery to every one, me included: how in tarnation did No. 1 get in here by herself and what happened to her crew and passengers?"

Douglas sat down on the edge of the president's desk.

"You wondered why it was like pulling a dinosaur's tooth to get Dacy to accompany us on our little expedition," he began. "Well, here's the reason." He removed a torn and crumpled fragment of paper from his pocket and handed it to Delray. "I picked that up in the control room of our 'Stratosphere Scout,' where Dacy had dropped it. I didn't want to show it to you before because—" he stopped and looked significantly toward Maureen, then continued, "Now I can tell all. Read it."

Delray read the words aloud:

"Air creatures have broken in and torn everyone to pieces . . . I hid in empty tank until they were gone

.... horrible days and nights
to get back to earth set auto-
matic pilot I must sleep, rest.

"ATWELL."

"Where in the devil did Dacy get this?" Delray asked.

"He apparently found it in No. 1 and didn't show it to anyone. Don't ask me what he had in mind in concealing it, because I can't tell you," Douglas said. "Now I might as well piece out the rest of the mystery as I see it. When the serpents left the ship Atwell crawled out of his hiding place and assuming he was alone, took

off and set the automatic controls for Long Island—"

"What do you mean 'assuming he was alone'?" the president asked.

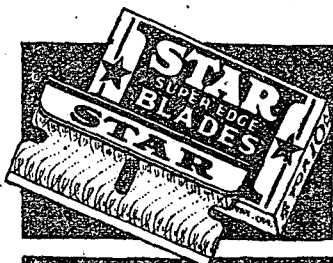
Douglas took a deep breath before answering. "One of the air snakes must have remained on the ship. And it got Atwell. That's the reason for the skeleton. Then the monster nosed around until it found the door that had been damaged and crawled out. But it must have got the blast of one of the tubes, for all that was left of it were shreds that were found clinging to the landing gear of the ship."

THE END



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The Fireless Age

By DAVID H. KELLER, M. D.

TWO PART SERIAL—PART ONE

FOREWORD

THE question may well be asked as to just what kind of civilization could develop without the use of fire?

Certainly, many parts of modern civilization would evolve without fire; people could learn to read, write, and even become cultured. In the future a similar question will be asked concerning the state of civilization had not the airplane, radio, and automobile been invented.

It is the author's opinion that a race would advance rather far without fire, probably not so comfortably or so rapidly. In this tale he has imagined such a race, a nation who knew fire, but, for religious reasons, refused to use it and who even punished by death all who dared think of doing so.

This imagined race lived on the continent that centuries after was called North America. They settled the region from the Pocono Mountains, southward to the Gulf of Mexico, and westward to the Mississippi River. There they built cities, and rose to a high state of barbaric culture. They successfully fought lower races of mankind, who turned down into South America. The glacial period finally destroyed them and their cities, and only a few remained to sail eastward, probably to land on the island of Atlantis.

The story could be written in a dozen different ways by a dozen Science Fiction authors. It has numerous possibilities of variation. But always it has to show the determination of the developing man to use all natural resources in spite of superstition, custom and the teaching of his religious leaders. It was a fireless age, but, when necessity drove, it became an age of fire, used as a servant and not as one of the Half Gods of prehistoric ages.

CHAPTER I

THE BOY SCOUTS MEET

THE Boy Scouts of Sylvania were gathering on Mount Minisi. Through the dense forests of white pine, spruce and oak they had worked their way to the top of the mountain to hold their spring meeting.

Only the older boys were permitted to attend. The junior members of the association never made this hike till they were at least thirteen years old. The group, finally gathered on the top of the stone mass, overlooking the river, were remarkably uniform in

size and appearance, as well as in age. A few older men were with them, not only as Scout Masters, but also as Care Takers. Any trip out of the cities into the dark forest was filled with danger. Every year there were fatalities, but the meeting had to be held. It was a part of the ceremonials, leading to manhood, to full membership in the White Ones.

From the rock covered top, they could see the river far below them. Many of the boys tried to throw stones into the water, but none was able to. Their school books told of a Scout Master, generations before, who could twirl a battle ax around his head and



The boy joined her and a few feet away from shore they turned to look at the lion who stayed at the edge of the lake.

hurl it into the river from this ledge, but, since his time, no one had been able to repeat his performance.

On the way up the mountain, there had been the usual chatter of happy, carefree boys. Once the groups met, the conversation died to whisperings. The four Scout Masters drew apart to exchange greetings, and to tell each other the news of their respective cities. Plans had to be perfected for the yearly inspection.

Four Scout Masters and one hundred Scouts were present. Twenty-five came from each city. Rarely any more, and never any less, except in the year of the Black Death, when the White Ones were so decimated that only thirty boys lived to make the trip.

"A fine lot of boys this year," commented Morrison, who came from the east of the river. "I have been a Scout Master for six years, and I have never seen a finer group. Our boys did well this year, studied hard, showed some initiative, and are in perfect health."

"Any losses?" asked Possert. "Our boys did well, but we had to send one into the long sleep. He talked too much. I think we have a little more trouble that way in the mountains than you do on the plains. After all, discipline must be preserved. We are so few in number that it will not do to have too much individuality at the expense of the community life."

"That is very true," replied Morrison. "We had nothing like that this year, but our traditions show that some time ago it was a serious matter. How is it on the other side of the Wind Gap, Hubler? Do you think there is any great difficulty in keeping the boys up to the mark? Are they following the traditions and the teachings of the Old Ones?"

"You bet they are. We have a system there. We keep them busy. That is the way to do with boys; keep them busy. Every program is so arranged that the boys have no leisure for insubordinate thinking. It does not make any difference if they are studying, working or playing, every minute of their lives is supervised. It takes time and thought, but it pays in the long run. Of course, we have the slate-quarries there, and have to send roofing to all of the cities, and, after a boy has worked with slate, he usually is too tired to do much thinking that is off the trail."

"Work is the solution, but it has to be filled with fun or it is hard business for youngsters," asserted Lawler, Scout Master from the plains south of the mountain. "We do a lot of farming down where we live, and I think our boys are happier, working in the fields than yours are, working in the slate-quarries or dark woods. But, perhaps, it is all in the way boys are brought up. Yet, in the way we do things, our boys are not as broad in their lives as I should like to see them. We raise farmers. Hubler's lads will all be slate workers. Possert's boys are woodsmen while Morrison's group would be lost in the woods, but they know a lot about clay working. I have thought for some time that the plan could be improved on. Have a rotating life for the four years before the last ceremonial. Have each boy spend one year north, east, west, south of the mountain. Give them all the same education, but, as far as their hands are concerned, broaden their abilities. Get the point? If you other Scout Masters think well of it, I am going to bring it to the attention of the Old Ones this year."

"It might work well, but I do not

see any special use in it," replied Morrison. "I personally, think that it is better for a boy to learn to do one thing well than four things poorly."

"I thought you would say that, but, suppose something happens?"

"What do you mean?"

"Just this," insisted Lawler. "Suppose something like the Black Plague started over again? Let us imagine that it would be very bad in Hubler's sector. All the old persons die, all the teachers, most of the Scouts. Where would we get our slate from? You people east of the river know clay, but, when it comes to slate, you are worthless. Not one of you has ever worked with slate. You would have to start at the beginning and learn, and it would take time; but, if every man east of the river had spent a year of his Scout life working in the quarries, it would be simple to keep on with that part of the work of the White People. That is my point. We need a constant production of grain, wood, meat, slate, clay, and, in order to get all these things, everyone should know a little about every kind of work."

"I thought the Old Ones decided five years ago that specialization was best," argued Morrison. "Find out what the boy wants to do, and then let him do it. I have a boy who loves chickens, and, since he was ten, we have been encouraging him in every way. Now, at fourteen, he knows a lot about it, and he has the finest flock I have ever seen."

"Same with our boys," agreed Possert. "One of our Scouts hunts bear. That is all he wants to do. Of course, he studies and works with wood, but every spare moment he has he is out after bears and he kills more than any other four of our Scouts."

"That is all true," sighed Lawler.

"I know what the Old Ones decided, and I know what we have been doing, but some time something is going to happen to us, and the White Ones will be fighting for their existence. The more things every member of the race knows how to do, the greater the chance of our surviving. Suppose we stop talking and start with the inspection? Boys are ready, I suppose?"

CHAPTER II

THE PATH TO MANHOOD

THE boys were lined up in four rows. Slowly, the four Scout Masters inspected every boy; his teeth, muscles, clothing, his equipment for camping and his stone weapons. The clothing was a simple woolen shirt and drawers, with a skin fastened around the neck and covering the back. Shoes of cowhide were standard equipment, but the boys showed much individuality in their skins. Those from the mountains wore bear, lion and deer skin; while cow, horse and rabbit skins were used by the Scouts from the low lands. The boys took a great deal of pride in this part of their clothing, which was more decorative than useful. Each lad carried a stone-tipped spear in his left hand, a stone hunting ax in his right hand and, over his back, was slung a quiver, filled with arrows and a bow. Since early childhood, they had been well trained in the use of all these weapons. Some sectors of the White Ones had experimented with the sling, but it had never been standard equipment of the Scouts.

Every boy passed a perfect test, as far as physique, clothing and arms went. The Scout Masters were pleased with the new group.

Possert, senior of the Scout Mas-

ters, then took charge of the meeting.

"None of you boys," he said from his position on the Speaker's Rock, "have ever been at this kind of Scout Meeting, but I know you all understand its purpose. Generations past, the White Ones had to fight for their existence. Sometimes they killed and sometimes they were killed. Since the Dark Ones died out, we no longer have to face human enemies, and even the animals we used to dread are no longer numerous enough to cause much trouble. But we must never forget the past. Say that with me."

The hundred Scouts and the three masters joined him in a deep chorus,

"WE MUST NEVER FORGET THE PAST!"

"And, because of this, we meet here today. This fall those of you who are worthy will be taken to our Sacred Place and given the final testing which will end in your full citizenship. But, first, you must live through this day. In a cave near here we have placed a saber-tooth tiger. You will surround the cave, and, when we open the door and he comes out, you are to kill him. Once he is killed, he is to be cut apart and eaten. Each of you must take a piece of his skin. Each of you must rub yourself with his blood. Each of you must take one of his bones, clean and polish it and keep it with you always. You have not fed for two sun-downs, but now you can eat your kill. Thus, you will start to become real men. Thus it was in the old days. Repeat after me."

"THUS IT WAS IN THE OLD DAYS!"

"And this is the path to manhood."

The boys repeated after their leader,

"AND THIS IS THE PATH TO MANHOOD!"

In spite of all their lessons, few of them really realized what manhood meant to them. Certain things had to be done when they were six years old, other lessons had to be learned at eight and ten, and from ten on, life had been hard, constantly filled with toil, hardship, a steady bending of their independent spirits to the point at which they became a little part of a tribe instead of a large bit of individuality.

None of them had ever seen the beast that they soon would be called upon to kill. They knew about bears, mountain lions, wild boars, but here was a thing, twelve feet long, shoulder high to their big men, an animal which had fangs twelve inches long, which could kill the largest bull with one paw-stroke and carry it off on its back. The boys had to face it, fight it, kill it and they were just boys. If this was life, it was hard life; it was a life different from any phase that they had ever seen. To become men, they had to go back to the perils of past ages; they had to forget their books, their chickens, their beautiful homes, their well kept farms. Bodies, always kept clean, had to be covered with blood and offal, stomachs accustomed to decent food had to be filled with tiger meat. Always guarded carefully, the prize riches of their people, they were now on their own, to fight the most dangerous of the animals of the world.

This was their path to manhood. It was a pathway that their Scout Masters could show them, but on which they could not go on with them. No matter what happened, no matter how the battle waged, irrespective of how many boys were killed, they had to go on this pathway alone.

It was the path to manhood!

Ages before, the saber-tooth tigers almost outnumbered the WHITE ONES. There was a time when no one could tell who would win the struggle, the animal or the man. Due to that struggle, man advanced in intelligence. The battle was finally decided by brains and not by brawn. The lesson was never forgotten; the Old Ones felt that it was vital that the young should have a terrible, real lesson, showing what had happened in the past. Tigers were caught each year in traps, tied and carried on carts till the caves were reached; and there liberated to teach the lesson of the past to the men of the future. In three other parts of the land three hundred other boys were waiting for the titanic struggle.

Four hundred boys! Never any more, and only rarely any less; the pick of all born fourteen years before, the survivors, the four hundred deemed worthy of life and manhood. Nice boys, well educated, in the best of health, were for one day thrown into the worst of past ages, to be prepared for the better things to come in future years.

Was it necessary? The Old Ones thought so.

Did the boys think so?

They did not think very much about the rightness, the ethics, the morality of the event they would soon be actors in. All they thought of was that it was one of the things that they had to do to become men.

And they wanted to become men.

Each year they had seen some of their playmates disappear; boys, who for this reason or that, could not pass the tests, could not measure up to the requirements, failed to show their ability to be worthwhile members of their sector. Now, in four sectors only one hundred were left. In

the entire nation only four hundred lived to face the four tigers.

It was the path to manhood. For centuries not one of their male ancestors had failed to walk down that path. They knew that they would not fail.

They might die, but they would not fail!

CHAPTER III

THE TIGER KILL

SLOWLY, they walked to a cleared spot on the mountain top, and formed a semicircle, with the center a large black hole in a lofty rock. The hole was closed by a skillfully balanced rock. Behind the rock was the tiger without food for four days. The Scout Masters on the top of the cliff could liberate the tiger by pulling on a rope, tied to the stone. Once out, the only way of escape for the beast was through the ranks of the Boy Scouts. It could not climb the bare cliff, but it could crush through, break down, toss here and there the pieces of the living wall surrounding the mouth of the cave.

No doubt the tiger did not understand the part he was to play in the initiatory ceremonies; but he did know that he was a captive, anxious for freedom, a hungry animal, wanting food, a wild thing, determined to kill his worst and weakest enemy, mankind. Though there had been no preparatory practices, in spite of the fact that he had never faced Boy Scouts, there was no doubt about the fact that he would play his part well in the drama of life and death. For the boys it was the pathway to manhood, but, to the tiger, it was a pathway to freedom.

The boys had been drilled in the part they were to play. Each was to

shoot one arrow and then charge with his spear. After that the battle ax remained, his last resort.

The Masters from their vantage point on top the cliff waited till they were sure everything was ready. Then, one dropped a white lamb skin down to the ground in front of the mouth of the cave. It was the signal. At once the four men started to pull on the rope, which threw the large stone out of plumb, off its center of gravity, and allowed it to roll to one side. Then they crouched on the rock and waited.

The boys, each with his bow-string stretched, arrow in place, ready to shoot, waited.

For a while the tiger waited, and then, it sprang.

In the air the arrows met it.

Landing on the ground, it sprang again, and this time met a wall of stone spear-points, but it reached the wall. With twelve inch fangs, with four terrific feet, armed with the sharpest of claws, it fought against the little beings who were trying to beat the last of life out of it with their battle axes. Filled with arrows, pierced through and through with spears, cut and pounded with stone axes, it fought on for two minutes, for five, and then came the end.

The tiger was dead.

And so were eight of the boys. Three were dying. Almost every boy had some injury. The Masters came down, and selected forty-four of the least seriously injured boys. Possert gave the order to them.

"Pick up these eleven Scouts and carry them to the edge of the mountain. Everybody come with us."

They picked up the eight dead and the three unconscious Scouts, and carried them on their shoulders. The other boys limped along as best they

could. At the edge of the mountain they waited. Hundreds of feet below the river flowed, a glistening ribbon in the spring sunshine between the two walls of rock, clad with evergreens.

"Throw them over!" sharply commanded the Master. "At once!" he commanded, but with a break in his throat. Some of those boys he had taught for four years; one was his brother.

Through the air the eleven bodies hurled.

"And, now, back to the tiger."

They limped back to the battle field and sat in a circle around their fallen enemy.

"Eat it!" Possert commanded. "Get your piece of skin. Get your cleaned bone. No one leaves here till all is eaten. Repeat after me, 'This is the path to manhood.'"

The eighty-nine Scouts and the three Masters joined him as they cried,

"THIS IS THE PATH TO MANHOOD!"

Bleeding, aching, suffering, they cut the beast up and ate the pieces. They scraped the bones and the hide. They licked the ground, covered with his blood clots. The four Masters watched them. At last Possert said,

"It is enough. Form companies and be ready to march."

The sun was setting when they reached the river where they were allowed to bathe. The Masters gave the wounded first aid. Discipline was relaxed.

"You may sleep now till morning," explained Possert, kindly. "You have all done well. The kill of eleven is a record. Your names will be remembered by the White Ones. Sleep now. To-morrow we will go back, each to his own sector, his own home."

In the soft glow of the twilight, each scout spread a bed of leaves, lay on it and covered himself as best he could with his back skin. In spite of their wounds and bruises and their unusual meal of tiger, they were soon fast asleep. The Scout Masters sat on the side of the river and watched the moon. There was little talking. Whatever each man thought, he kept to himself. Possert kept looking down the river, down to the sharp edge of the mountain, where he knew his dead brother lay among the hemlocks. The other three finally went to sleep. Possert was still awake when the sun rose.

Without breakfast, the Scouts, after a swim in the river, started back to their homes. It was regulations to eat nothing but tiger on this hike. They started silently, with none of the usual chatter. A few days before they had been boys; now they were on the road to manhood.

CHAPTER IV

MORE BEAR GOES HOME

THE city of the northern sector had been built in a somewhat sheltered valley, but still near to the crest of the mountains north of the Water Gap. As far as architecture was concerned, it looked like the other cities of the White Ones. It was more of a house than a city, more of a beehive than a house. Built out of rocks, mortared together with mud, it was only two stories high, the first floor being dug into the rock and used only to keep cattle and supplies. At regular intervals in the roof of this first story, holes permitted the heat from the animal and the manure to partly warm at least the floor occupied by the families, who

had no other source of heat in the winter time. The windows were small and open except in the most severe weather, when they were covered with fine sheep skin, well greased, through which a little light came. The walls were hung with bear skins; the floors were covered with hay.

The White People lived without fire. Never having used it, they did not need it. Their bodies, never having been pampered, were cold resistant; their stomachs, never having had cooked food, were able to eat uncooked food. In fact, these White People of the northern sector rather prided themselves on the truth that they were stronger, larger, healthier than some of the White Ones who lived in a warmer climate.

It was spring time. That meant house-cleaning time in the community house. The hay used during the winter had to be taken out and the floors cleaned. The stables had to be emptied and the cattle taken to their pasture. The furs had to be aired and the windows opened. After a winter in the mountains it was good to be out in the sun again, without having to put furs on.

The boys of the Scout Troop came back home. Their reception was without outward emotion. Possert had taken twenty-five boys to the Water Gap. He brought back nineteen. His boys were hunters, fearless and accustomed to big game hunting. At the Tiger Kill they had led the attack without thought of self. Of the eleven who fell at the battle field, six had come from the north sector.

If the parents of the dead boys suffered, they did not show it. Pride of race, strength of personality, custom, developed through long years of cultural restraint, made it necessary for them not even to notice that their

boys had not come home. Possert visited the Old Man of the sector and gave a short report, and life went on as usual.

One of the boys, More Bear, son of Many Bear, was an only son. His left thigh had been badly torn in the fight, and it had only been by the greatest effort that he had walked home. His mother washed the long cut, plastered it with healing herbs and made him comfortable on the best skins. Early in the afternoon the father joined them.

"Have a good trip, my son?" he asked.

"Fine."

"That is as it should be. For some years I have been making a medicine bag for you out of a beaver skin. I give it to you. In it I have placed the tooth of the sea cow that the man of our family brought many generations ago from the Great Sea. It is yours. Put your Tiger bone and Tiger fur in the bag with the tooth. Our family have always hunted, and you may become the greatest hunter of them all. But, first, you must become a man."

"I have started on the path."

"Tell me of the fight."

The mother silently came nearer, her eyes shining with pride.

"There were one hundred boys there. As we said when I first went to school, ten times the fingers on the two hands. Twenty-five boys from each sector. The clay boys, the slate boys and the farm boys were all there. A fine lot of fellows, but I think that our boys were a little larger. Every boy made perfect in regard to his equipment. Then the Masters let the tiger out. Of course, you had told me about the tigers, but, Father, you should have seen this one. He was big, about twice as long as my spear, not

counting his tail. I aimed my arrow at his eye as you advised me to, and then I went down on one knee, braced the end of my lance against the ground, and it went right into him as he sprang against it, and, when he fell, it broke in two. That was the end of the fight, as far as I was concerned. The beast fell on top of me and knocked my breath out of me, and, when I was able to breathe again, he was dead. But I never let go of my battle ax."

"So, you did not help to kill him?" asked the Mother.

"Let the boy tell the story in his own way, Lambkin," scolded the father, gently. "What happened then?"

"I did what I knew you would want me to. I hunted for my arrow and for my spear head. My arrow had gone through the eye into the brain. My spear head had pierced his heart. I knew this, but I did not boast of it. This is forbidden by the Scout Code. But I want to tell you and Mother about it because, from my bear hunting, I know that I might have killed the Tiger single handed. I am but a boy, but some day when I am full grown I will go and try it. Have you ever heard of one of our hunters doing that, Father?"

The woman, Lambkin, smiled.

The man opened his medicine bag and took out two long polished teeth.

"A man once did that, and here are the fangs to show that he did. I am glad you are home, my son. Some day, when you are filled out and have your full height, I will go with you to the land of the Tigers and I will watch you make your solitary kill. But, for a few years, you had better practice on bears and mountain lions. Better get some sleep now. To-morrow you must go back to school."

"The boys all did well," said More Bear. "Even the clay boys are fine Scouts."

"That is good. We need brave men to keep the White Ones alive," commented the mother.

CHAPTER V

THE OLD MAN

THE OLD MAN sat on the top of his home. The sunshine felt good to him. He was glad that he had lived through the winter to see another spring. It was always a pleasure to him to see the new green on the evergreens. In his heart there was a great love of the woods and the animals living in it.

Possert, the Scout Master, sat near him, telling him about the trip to the Water Gap and the ways of the boys in passing their test. Possert talked slowly, carefully, and in the greatest detail told of all that had happened from the time he and the Scouts had left the northern city till they had returned. In all of the report he entered into no personalities. He neither praised nor blamed any of the boys. They had lived up to the required standards of bravery. The sector had reason to be proud of them.

Cellar, the Old Man, smiled grimly as he heard of the fight.

"It is all good," he said. "So long as we have boys like that, the White Ones will live on. It is more important that we have brave men than that we have many men. And, now, let us forget for a while that I am a leader and you are a Master, and tell me about my Grandson, More Bear. How did he do?"

"About as you would expect. He shot his arrow, plunged his spear, and went asleep under the Tiger. When

we came back, I watched him. The first thing he did was to hunt for his arrow and broken spear head. Some of the other boys did not care what they had done, but that lad wanted to see how close to the mark he had come. His arrow had gone into the eyesocket and lodged in the brain. His spear head was in the Tiger's heart. I saw it all, but said nothing. He said nothing, but I bet he told his parents about it. No more than natural that he should. He is a great boy."

Cellar smiled.

"I suppose the wise men in our race would say that it was hereditary. Our family have always hunted. Some day I will show you the book. A page for each generation, and, on that page, painted the great kill by the great hunter of our family. Life at present is quiet. We even have to catch the tigers to use in the initiation ceremonies. But, when we first came to this country, we were fortunate if the tigers did not get us first. I think about it a good deal. Life is tame. New words are being used. At the last meeting of the Old Ones the students talked of things like higher education and culture and art. I listened and kept silent, but I had my own ideas. How about the other three centers? Will they send us our yearly supply of clay pots, slate and grain? Is there anything new? Is all well with them?"

"All seems to be as usual. Crops were good south of the mountain. We can have all the slate we need. The clay workers have a new method of making pots which will make them stronger and last longer. They asked if we wanted them painted. I said no, and that all we wanted was to have them strong and large enough to hold our food."

Just then a girl came up on the roof.

"One of our pigeons has just come from the west," she said. "It bore this message." She handed the Old One a small paper. He handed it to Possert.

"You read it," he commanded. "My eyesight is poor."

Possert opened it and read it silently.

"It is simply the annual message from the Center, telling that the Harvest meeting will be held as usual."

The Old Man turned to the girl.

"Send one of their pigeons back with this message," he ordered.

"THE HUNTING SECTOR OF SYLVANIA WILL BE REPRESENTED BY CELLAR, THE OLD MAN; POSSERT, THE SCOUT MASTER, NINETEEN INITIATES AND FOUR WARRIORS."

The girl disappeared.

"What do you think of having the women take care of the carrier pigeons, Possert?" asked the Old Man.

"It seems to work out all right. At last, I am in favor of it. In the future I believe we shall have to depend more on our women."

"Perhaps, but there is another side to it. In former times the women worked only in the home, and they had children. I married a well-educated woman, who, in addition to her regular knowledge, wanted to study art. She became the pictorial historian of our four sectors. She even helped decorate the temple at the Center. But we only had one child, Many Bear. He wanted to marry Lambkin, who was a fine girl and made a fine wife, but she wanted to write. She had an idea that we should have books; so, she took her skins and her pigments, and, while her mother-

in-law painted history, she wrote it, and they only had one child, More Bear. I know women, and so do you, who just stay at home and sew and cook, and they have lots of children. But they are few. It is all well enough to say that one brave man is better than many ordinary men, but, when the White Ones came to this country, we had many men, and, if we had not had many men, we should have been wiped out as the sun wipes out the frost on a fall morning. We are a great people, but we shall die as the elephant died in this country, unless we have more children."

Possert was silent. His wife spent hours breeding glowworms and fireflies. She felt that some day they could be grown big enough and kept alive long enough to be of real use for lighting the inside of their homes during the dark hours. Because she had insisted, he had taken her for a long trip to the south, to learn how the White Ones there used glowworms for illumination. Possert was proud of his wife, but they only had one child, and that one was a girl, who was working in the pigeon houses.

After a long silence, Cellar gave his orders.

"Go on working with the boys. Teach them all you know. If you need help in any direction, ask for it. In one month we will start on the journey. I will select the warriors; if my memory does not fail me, there are still some men who have not made the journey since they were boys. Be ready in a month. All is well, except for the women. If they keep on being more interested in all these other forms of work and less interested in their homes and families, the time will come when there will be an end to the White Ones."

"Shall you march the whole dis-

tance? Or shall you try something new and use some of the sail roads?"

"I think that we had better walk. A few horses to carry the packs, but we will walk. But tell me again about that road you saw last year."

"It looked like a good idea to me. One of the shore sectors started it on the beach. The idea was that if wind could make a boat go on the water, wind could make a cart go on the land. It worked well on the hard beach, but the hard beach was only by the water. So, they made long narrow beaches out of tree trunks, laid end to end, with long slots in them to hold the wheels. I saw such a beach on the prairie. It was as long as a man could walk in a day, but the cart went from one end to another in a little time, when the wind blew hard. I could run faster than the cart went, but, when I walked, it passed me."

"And our men sat in the cart?"

"Yes, and carried their hay in it. But, when the wind blew day after day in one direction, they had to use horses to take it back to the other end."

"I can walk to a place and back again, no matter how the wind blows, and my horse can also," replied the Old Man scornfully. "Why should I use something that can only go one way and then has to have horses take it back? No, it may do for the weak ones who have little legs, but I will go on as my Fathers went on."

Possert started to frown.

"There is another thing about it that will force them to stop it. I heard whispers of it. When the wind blows strong and the cart goes fast, the hubs of the wheels become hot, as the result of a summer sun on a rock. Once a man saw a fog come from the wheels."

"What do you mean?"

"Just that. It looks as though the God did not approve of it. The men running the sail cart would not speak of these things to me, but I was told they had to stop the cart often and put more fat on the hubs. But I know and you know what the end will be, if the Old Men in the center realize the danger. It will be death to the men of the shore who are playing with forbidden things."

"Did you by any chance ride in this sail cart?"

"I did not, but I wanted to. At the same time I would never dare to get in one when the wind was blowing strong."

"I will walk!" cried the Old Man.

CHAPTER VI

CHILDREN IN LOVE

MORE BEAR kept quiet for three days and at the end of that time his leg was nearly healed. He was anxious to leave the house. There was something he was anxious to do, some one he wanted to see very badly. He dressed in a new scout uniform that his mother had made for him, hung a very special bear skin over his shoulder, and, with his bow and quiver on his back and his spear and battle ax in his hands, he very casually, and very proudly left his home and walked away slowly from the little city. Little children called him by name; girls and women shouted that they were glad to see him out again; even the men he passed welcomed him. He felt that he was certainly growing up.

Out in the dark forest he met White Pigeon, Possert's daughter, the girl who was starting to work with the carrier pigeons, the one who had

brought the message to the Old Man. She was only thirteen years old, but she already knew more about pigeons, how to breed them for speed and homing qualities, how to handle them, and write and send messages, than any one else in the sector. She was a lovely child, blond, with long yellow hair, and, though More Bear was a year older, she was a little taller, as she had almost reached her full height, while he would keep on growing for at least two more years.

They had known each other since early childhood, played together, gone to school together. They had even gone hunting with each other. The older people took it for granted that some day they would marry.

"You are almost a man now," she said when she met him.

"Almost," he said, kissing her. "At least, I have started on the path. We had a great hike this time, but I did miss you. Guess we have to get used to these separations. But when I am full man and we are married we can be together a lot. In fact, I have been wondering how you would like to live apart for a few years? It has been done, you know, and all we have to do is to get permission from the Old Man. I know a dandy cave, and I am sure we could get along all right."

The girl frowned.

"You mean be away from the city for two or three years?"

"That is just what I mean. We will go bear hunting, and fishing and pick nuts and berries and swim and all that sort of thing."

"That would be fine. I should like it a lot, only I do not see how I could do it."

"Why not?"

"What would my pigeons do without me?"

"Do you love those silly birds more than you do me?"

"You know I don't, but that is my work, just as bear hunting is your work. If we marry and live in the city, I could take care of our home and look after the pigeons at the same time, but I do not see how I could possibly carry on if I lived with you in a cave. Not that I do not want to do it. I should rather live with you in a cave than with any other man in the best home in our city, but I just have to take care of the pigeons. In a few years I shall be in complete charge. This morning I carried and sent messages for the Old Man. Think of that!"

The boy smiled sadly.

"I guess you women are all alike. I talked to Father about it last night, and he said he wanted to live in a cave when they first married, but Mother wanted to be where she could go on making books. Suppose we go down to the lake and go swimming? We both enjoy that, and probably the cold water will put some common sense into your brain."

In the ice-cold water More Bear showed that he was the stronger, but White Pigeon was able to beat him to the other shore. She had a stroke that few of the men were able to learn. Making use of this, she reached the shore, waded out of the water and was starting to wring the water out of her hair while the boy was still twenty feet from shore. Suddenly, he called,

"Jump!"

Surprised, she looked at his frightened face and then turned around to see what had caused his alarm. There, in the bushes, crouched ready to spring at her, was a mountain lion. She started to run for the edge of the lake, stumbled on a stone and fell

forward just as the lion sprang.

More Bear, still in the water, realized but too late that he had done something no Scout should have done. He had left every weapon on the other side of the lake. He did not have even his short, stone hunting knife. And there was his girl, his woman, his future mate on the ground, and the lion would reach her in a few seconds. Stumbling through the shallow water, he picked up a large cobblestone and threw it. It struck the lion on the nose, not the most dangerous spot, but certainly the most sensitive one. For a second it diverted the beast's attention from the prostrate girl to the boy. The lion paused, snarling, undecided as to the action of the next second. That moment's hesitation was fatal. Another stone, larger, sharper, struck it, this time between the eyes, and another and still another found the mark. The girl, springing to her feet, ran to the water and threw herself in, and started to swim to safety.

The boy joined her, and a few feet away from the shore they turned to look at the mountain lion, which stayed at the edge of the lake. Then, slowly, the young couple, side by side this time, the race over, the thought of disaster still with them, swam back to their clothing and safety. White Pigeon put on her clothing, but More Bear simply hung his hunting knife around his neck and took his spear in his hand.

"What are you going to do?" asked the girl.

"I am going back to kill that lion," he replied as he started to swim back across the lake. "No lion can treat you that way, and keep on living."

She picked up his quiver with the bow and arrows and started to run around the shore of the lake. He was

skinning the dead beast by the time she reached him.

"It will make a fine skin for the cave," he explained. "Full grown lion and in fine condition. But we must be careful. We think that, just because nothing ever happens, nothing ever will happen, and then, when we least expect it, something does happen. I never realized how much I loved you, till I thought I had lost you. I want you to promise to marry me just as soon as I am admitted to full manhood by the Old Ones of the nation."

"I have always wanted to be your woman," replied the girl, and she laughed a little, even though tears were in her eyes. "And, if you want me to go and live in a cave, I will do even that."

So, they arranged matters as they walked back to their city, carrying between them the lion skin. But More Bear had a peculiar feeling that, when the time came, they would live in the city and she would keep on taking care of the pigeons, just as his mother kept on making books and his grandmother kept on painting pictures.

CHAPTER VII

TEMPLE OF THE FIRE GOD

IN practically the geographical center of the nation the White Ones had built a meeting place. It was not a city, for few lived there the year around; it was not a trade center, for it was far off the beaten pathways of the race; it was intended for one thing and one thing only.

Surrounded by lofty mountains, hidden on all sides by mountain crags, covered with virgin timber, visible only to the eye of the soaring eagle, the small cup-shaped valley lay, less

than a half mile in diameter. In its exact center was a building, empty, except for a large circular stone. The stone was concave, and in it had burned for many centuries the Fire, Sacred God of the White Ones.

It was a fireless age, but it was not without knowledge of fire.

Fire was the God, and not the servant of the race.

Children were born, grew to become adults, died as seniles; springs were followed by summers and winters; years came and died; but the God never died!

Hour after hour, day after day, year by year four chosen men watched it, fed it, cleaned it, so that it would live on. Two by night and two by day for one year, and then four more men for another year.

This was the Center of the race, the altar of the God, the place every male had to visit at least once in his life before he could become a man. In this building decisions were made, the future was provided for, trials were held here, and punishments given. The God consumed, not only wood, but members of the race found guilty of law violation.

By the fire, on a chair of gold, the Old Old Man of the White Ones rested throughout the year, waiting.

The chair of gold had been built through the centuries, gradually growing larger as it had been added to. Pounded into shape by stone hammers, like the Fire God, it was a symbol. The Fire was God in a spiritual sense. The Old Old Man was God in a material sense. He lived in the Temple till he died, and was replaced by the oldest of the Old Men of the race. The four chosen men cared for both gods, loving the one and fearing the other.

The time for the Harvest Celebration had come. From four directions the worshippers were arriving at the Temple. At last they were all there—The Fire God on the altar—The Old Old Man on his gold chair—sixteen Old Men seated on the stone floor around him.

Sixteen Scout Masters and a few over three hundred Initiates, the chosen Boy Scouts, who had faced the Tigers and were now ready to be made men were there. They stood in orderly fashion, silent, straight—wonderful examples of adolescent manhood.

The Old Old Man stood up and started addressing the boys.

"You have come here to take the last steps on the road to manhood. I know that so far all of you have been found worthy to become men. First, you must know about our God.

"Many years ago, many hundreds of years ago our race knew what fire was. It was used to heat the caves, to fight wild beasts, to cook the food with. To us, it was like water, wind, and rock. At that time we did not know it was a God and would become angry if it were treated as a servant. At a harvest festival all the race was gathered in the dark forest. All that year there had been no rain. The leaves were dry, the woods were dry. Each family had a fire. In the center of the camp there was a large fire. One night the terrible God sent wind, a great wind without rain. By the wind he scattered parts of himself through the woods, and they burned with a great burning. Our race fled before the angry One, but they could not run as fast as the God could fly though the air. He was determined to kill our race for our sins against his greatness. He followed us to the shore of

the great ocean and, not till we hid in it, were we safe.

"Tradition says that less than one hundred reached the safe ocean. All the rest of a great race were sacrificed to the angry God. Rough rafts were built, and on them the great ocean was crossed. Only sixty-five lived to see the new land.

"Those men and women were brave, intelligent, industrious. From them our race has grown. We knew men, we knew nature, we knew the wild beasts. We conquered everything. We survived. We feared nothing but the God Fire. This temple was built, the altar carved and the Fire was placed on it and fed.

"It is a God, a Great God.

"Never again will we use it as a servant. Once we were taught the lesson. If Fire has to teach us again, we will be destroyed utterly. You will now raise your right hand and give the promise.

"We will never use Fire.

"We will not use Fire to warm our bodies, cook our food, work our metals, fight our battles.

"We will never use Fire.

"The penalty is Death!"

"DEATH!"

Part by part he said it and part by part they repeated it after him.

The Old Old Man turned to the sixteen Old Men behind him.

"These Initiates have been judged worthy of manhood. Are all of you satisfied as to their ability to become men?"

"We are," was the reply.

"They must make the blood sacrifice to our God of Fire."

Old Man Cellar walked up to the altar. By right of age he ranked the others. He was older in years, but younger in general appearance. As he moved forward, Possert, the Scout

Master, also walked to the center of the Temple, followed by his scouts. Possert took the first lad by the left wrist and extended it to the Old Man who took the little finger and swiftly amputated the last joint with a knife of obsidian. The little-finger end was thrown on the Fire God and the next candidate for manhood came forward. In a little time the mountain boys by their blood offering, had become mountain men.

Without delay, Old Man after Old Man sacrificed the Scouts from his sector. It was a token sacrifice, a part for the whole, a traditional memory of the time when the Fire God had demanded entire bodies, almost the entire nation, as a burnt offering to his offended majesty.

Finally, all the boys had become men. The Harvest had been completed, as far as that part of the ceremony was concerned. Once again the audience stood in rigid rows around the sides of the Temple. Then the Old Old Man cried:

"You are now men. You have finished the road!" And the new adults of the White Ones cried after him,

"We are Men!"

One of the Old Men came to the front of the altar.

"Judgment!" he cried. "One of my men has broken the Law. I ask that he be tried."

"What has he done?" asked the Old Old Man.

"He left my city and was gone for two years. When we found him, he was in a cave and had the Fire God with him. Let him tell the tale."

"Let him tell it," agreed the Ruler.

Two guards brought him in, not bound, but a captive.

"Tell your tale," was the command.

"It is worth telling," replied the man.

CHAPTER VIII

ONE MAN LEAVES THE PATH

“YOU all know that we have no metals we can work with. Gold, copper, and a little tin. All are soft; they will not cut, they will not hold an edge. What is the result? We work with stone. Think of it? Stone, when our mountains are filled with iron. Trying to cut down trees and work the wood with stone, when we could have iron. I am a metal worker. All that the White Ones knew about metals I knew. But I wanted to know more. So, I left my sector and lived by myself for two years. I used the Fire God. I tamed him on my forge. He never hurt me; he would not hurt anyone who was careful. I experimented with iron ore, burnt out the dross, made pieces of pure iron. I learned how to harden it, give it shape, an edge. I learned how to put pieces of sharp iron on the end of a stick so I could cut things with it. It was fun to cut down a tree with my tools. I made little pieces of iron to drive through two pieces of wood to hold them together. I made needles out of it to sew with, so the women would not have to use bone any more. I made iron fingers to hold the hot metal and iron pounders to shape it.

“The Old Man found me. He said I had broken the law. I was just trying to make things easier for our people. Some day we shall be found by a nation who has iron weapons, and they will break us, as children break a bird's egg. I am offering you tools, weapons. There is no telling what use you can make of a hard metal that can be shaped and given a cutting edge. But to work this black stone that turns to metal, you must use Fire. Have I done wrong? Look at

this knife. You can cut hair with it.”

He handed the knife to the Old Old Man, who took it, felt its edge and then handed it to the other Old Men for their inspection. The ancient made no comments, but sat with his eyes closed. Suddenly he slumped downward in his chair.

He died as he lived, a Ruler of his people.

They took him out of the Temple.

Cellar walked up and sat down in the gold chair.

“You know the law,” he cried. “I am the oldest of the Old Men, and now I am the Old Old Man. What do you say concerning this prisoner?”

“He has broken the Law!” The Old Men cried.

“What is the penalty?”

“Death!” was the low answer.

The man in the gold chair turned to the prisoner.

“I listened to everything you had to say. I am sure that much of what you said was true, but the safety of our nation must come first. It matters not if we have to fight with weapons of stone, work with tools of stone, eat our grain and meat as we find it, sleep in houses that are cold in winter. Nothing counts that happens to the individual, if only the nation can go on living. Once our God was offended because we used him for a servant. He killed all but a few, but those learned the lesson. You have broken the Law. More Bear! Come here!”

The young man, only a few hours ago a boy, came up to the gold chair.

“This man has wandered away from the path of manhood. Kill him!” the Ruler commanded.

More Bear hesitated, then swung his lance forward and thrust it through the prisoner's body, so far that the stone head came out the back.

"Give him to the God!" Cellar ordered, and the guards placed the body of the dead man on the flames.

The Scout Masters and the new men of the nation left the Temple. Only the Old Men remained.

"You can now report to me the condition of our people," the new Ruler said.

One at a time the Old Men read their reports, the number of children born during the year, the number of deaths, of marriages, the condition of the harvest, the success of the hunting, the new inventions to make life easier. Cellar heard them all without comment, up to the very last man. Then he said:

"I come from the dark forest. We love trees and hunting. I have watched trees grow. The oak lives a long time but it must keep on growing a little larger every year. When it ceases to grow, it begins to die. The White People have ceased to grow. We will die. We have too many deaths and too few births. What do our wise healers say?"

"We have had hard winters," answered one from the South. "Even in our warm lands the winters have been bitter. Our women are bitter. They say, 'Why should we bring children into the world if we cannot feed and keep them warm in winter?'"

"Are we growing tender?" asked Cellar.

"No, but our women are growing intelligent. We men know the Law, but the women have never been to the Temple. They know our God only by tradition. They are talking."

"Talking of what?" asked the new Old Man, sharply.

"Of keeping their children warm and giving them better food, and whether it would be worth while to move the entire nation to the far

South, where there is no winter. They argue about the sun, and even my wife says that the sun is the true God and that the Fire God we men worship is only a symbol of the sun."

"Why don't you make them stop talking?"

"Can you?"

"No. But we are men, and we have the Law, and we know the danger; so, we will follow the path. Perhaps we have been giving the women too much education, too many advantages, too much freedom."

"We have not given them anything," countered another man. "What they have, they took without asking, and they take what they want. They are restless. Some women even want to come to the Temple. They say that they are equal with men. Our women even threaten to take the young children, go far South and leave us forever."

"That might have some advantages," said Cellar, smiling. "But if you men cannot hold your women, you are not entitled to have women. I will think over all this during the next year as I sit in the gold chair and watch the worship of the Fire God. You think over it in your sectors, and next year we will talk about it. Leave me and go. Teach the young men the Law. See that they follow the path. As for the women, we shall have to do what we can with them. I have lived with one many years. She is a fine woman, and I love her dearly, but I never have understood her."

After the meeting of the Old Men, Cellar sent for Possert.

"You shall have to tell the people of the mountains the news," he said gently. "Be sure to make my wife understand that this is none of my doing and not to my desires. I have always been active, and to sit in a gold

chair till I die is something I shall have to learn to do. There is no need of telling my son to look after his mother, for he will do that without the telling. Say to all that it is my wish they do not depart from the path. I suppose Fastfoot will become the Old Man of our sector. I have known him since a boy. He is to be trusted. Have you anything to say?"

"One thing. Why did you have the boy do it? That was man's work."

"More Bear is my grandson. In many ways he is a different boy from the others. I have talked to him, and he is a thinker. There was a fear in my heart that he would some day think too much and depart from the path. I watched him as the prisoner told his story, and in my grandson's eye was a gleam as the tale of iron and sharp weapons was told us. I wanted to teach him that no one could wander from the path and live on, and my way of teaching him was to make him the executioner of the law-breaker."

"He did as you commanded," the Scout Master replied. "He did it without answer or argument, but it hurt him. You gave him an injury today that he will never forget and maybe never forgive. You are the Old Old Man, and I know that I should not talk in this way to you, but you might have told one of the older men to do this thing and not a boy."

"I want him to be a man!"

"He is one! but I do not think you were wise."

CHAPTER IX

MORE BEAR TRAVELS ALONE

THE next morning most of the men left the Center and the Temple. The men from the mountain had been the first to leave. All that day they walked through the

forest. At night they prepared to sleep.

More Bear asked the Master to come a little apart from the group.

"I want to talk to you," he said.

"What is it?"

"Am I now a man?"

"You are."

"I know I am. I have my tiger skin and tiger bone and my medicine bag. I have passed the tests and been sacrificed to the Fire God. I have taken the vows and been accepted by the council of Old Men. So, I am a man. I have my rights. I, now, according to the Law, tell you that I am going on a lone journey, and, according to the Law, you cannot say 'no' to me."

Possert looked at the fifteen-year-old boy, now called a man. With some of his sector he would have argued, given advice, but not with this man. So, he simply said:

"That is your right. May you come back safe. Any messages?"

"Yes. Tell my parents what was done, and say to your daughter, White Pigeon, that when I come back, knowing more than I do now, we will go on with our plans. That is all. I leave you in the morning."

When the men awoke the following day, one man was missing. He had thought it best to leave before his fellow mountain men knew what he was doing. He did not want any company.

For the next two years More Bear wandered through the land of the White Ones. He visited every sector, and studied the little individual habits of each city.

He fished on the South Gulf with the sea folk, hunted buffalo with the men living west of the mountains. He rode in the sail cart and learned how to make it start and stop. Far

South he lived with the White Ones, who dwelt in the houses without walls on account of the heat, and kept large fire beetles in cages to give them light at night. He even, to the great astonishment of the Professors, went to the college of the race, and asked to be told more of geography, and metals, and winds and weathers and all that there was new in writing and the making of books and the reading of them. He was the first man who had ever said:

"Don't tell me what you think I should know. Just answer my questions, for I am the only one who knows best what I want to learn."

At last he was ready to return to his city, and, always peculiar and very individualistic, he decided to go in a bee-line rather than to follow the beaten roads. So, with the peculiar homing instinct of a carrier pigeon, he started up and down mountains and over streams. He lived on the country, hunting game and picking grain and fruits as he went.

One day, far ahead of him, he saw something curling languidly up above the trees on the mountain ahead of him. That was new, something he did not know about, something that he had to investigate; so he walked carefully and finally crept up the mountain above the curling thing that he might look down on it. He saw it was coming out of a hole in the side of the rock, and below there was a little noise.

He knew about caves, and he was sure that there was a cave there, and that something or some one was in that cave; so, he worked his way very gradually around to find the opening. There were signs of life there, and human life at that. To More Bear that meant only one thing, and that was that the cave was oc-

cupied by one of the White People. He knew there were other people in the world, but no one of his race had ever seen them, and there certainly were none around there.

He waited till night, and then he climbed a tree from which he could see the mouth of the cave. Morning brought him what he wanted to see. A man came out from the cave. More Bear did not see any reason now for either fear or caution; so, he climbed down the tree and ran to the man, his right hand outstretched, palm forward to show that he had no knife in it, which was the peace greeting of the nation. To his surprise, the man threw his spear at him. The mountain man dodged, jumped forward, and, with bare hands, made him prisoner. It was not a fair contest, as the stranger was little and hardly more than a child in More Bear's hands.

"I came to you in peace!" demanded the victor. "Why did you try to kill me?"

"Because I was sure you would kill me!"

"Why should I kill you?"

"Because of the path. Because I have broken the Law. I thought they had found me and had sent you to kill me."

The mountain man released the little man.

"What Law have you broken?" he demanded.

"The Law of the Fire God. I use it as my servant."

"In the cave?"

"Yes. I have lived here for three years."

"So, that is it. Show me your sin."

"Come and see. But you will not kill me?"

"I will not kill you."

"But what of the oath?"

"That is for the Old Old Man to say. I killed once, because he ordered me. The man I slew was young; he knew a great deal. It seemed to me that he was a good man, but I killed him because I was told to do so by the Old Old Man. But the Old Old Man is far away now, and I cannot hear his orders. You are safe."

"Then I will show you. Come with me into the cave."

There was only one door to the cave. It was fall; the leaves had turned purple and gold; there was a chill of winter approaching, but the cave was warm. In the center was a large, oval shaped rock, flat on top, and there were things on that rock that More Bear had never seen.

CHAPTER X

FIRE BECOMES A SERVANT

"I AM going to ask you some questions first," said the stranger. "Do you eat wheat and corn? If you do, how do you prepare it?"

"We grind it. Many years ago we used two rocks and ground it, a grain or two at a time. Then we mixed it with water or milk and made cakes of it, and we placed those cakes on the hot rocks, heated by the summer sun. When they became hard and dry, we put them away in reed baskets, and kept them against the day of our hunger in the winter time. Later on we learned to make two rocks rub against each other by means of water power. A dam was built, and the water, falling down, turned a wooden wheel. In places where the wind blows we learned to use the wind to turn the wheels. With these improvements, we could make more flour. Beyond the mountains are the grain growers. They have good

harvests and always wind; so, they make flour for other centers. That is how we use the corn and wheat. Did you know that?"

"I did. When I became a man, I went on the lone journey, as you seem to be doing now. I saw everything and learned all that I could, but I was not content. I think that it was because I always had pain inside of me. It was hard for me to eat, especially in winter time. So, I came here, and started to conquer the Fire God. First, I found him in the woods where he had come down and hit a tree with his fire finger. But, later, I learned to make him.

"Yes. I found him in two pieces of wood that I rubbed together. He was little at first, like an unborn child, but I fed him, and he grew. I can make him now anytime. I said something then, and I will say it to you, even though you kill me. *If I can make a God, then I am a greater God than he is!*

"I took the Fire God and made him work for me. When I killed a bird or a rabbit, I put him near the God and ate, and, when I ate that food, I did not have the pain inside of me. If I made the fire large enough, I was warm in winter. More and more I learned about Him; then I started in to build these things you see. I found that he had a breath, and I made a place for Him to live in and breathe through. That was five years ago. The work I did then I tore down. I was not satisfied, but at last I learned the great secret. I found that His breath could be put into water.

"Do you see that white vessel there? It is made of clay, a very strong clay that was able to stay together, no matter how angry the God became. Perhaps the learned word and metal men have a name for it. I put the

Fire under it and water in the vessel, and from the water came the breath of the God, and that breath looked like a white cloud. I made another vessel with just a small opening in it, and then the breath came out like wind. When I put a little windmill in front of it, the wheels turned, just as the windmills that grind grain in the west. After months of hard work I made a little mill and found that, with the breath of the Fire God, I could turn the stone mill and grind corn. I can show you if you will not kill me. I grind just one grain of corn at a time, because it is all very small, just like a humming bird.

"All the time I was looking for different food, food I could eat and live on without the pain inside me. I found that meat placed in the hot water was good; the water was good to drink. And I took the corn cakes and placed them on top of the God and that was good. So, at last, with this new food, prepared by making the Fire God work for me, I grew strong and the pain left me."

"But you grind but one grain of corn at a time?" argued More Bear. "A child could do that with two stones."

"But suppose it was made larger, this thing I have made? Suppose it was very large? Then the corn and wheat could be ground a basket at a time. But to do that more than one man would have to know my secret. If it were large the grain could be ground at any time, even if the stream of water was frozen or dry and the wind did not blow. And if the women and little children ate the meat from the water and drank the water the meat was in, and if the men ate the meat and the cakes cooked in this new way, the whole of the *White People* would grow stronger."

"We are strong enough!"

"Some are, but others are weak and have pains as I had."

"Show me. Make the wheels go around."

The stranger put more food, food of twigs and bark into the Fire God, and soon little wheels and pieces of stone started to move on the top of the flat stone, and between two revolving stones the stranger dropped a grain of corn. It slowly became powder.

"What do you call this breath of the Fire God?" asked More Bear.

"Good. I had to have a name for it. I talk to myself, since for years I have seen no one and I did not want to forget how to talk. To all these things that I made I gave names. This breath flowed like a stream of water. It was a stream, but not a stream. So, I changed the sound to make me think of a stream and, also, because it had a sound like the hissing of a snake, sssssssssss, I made the name steam. Say it after me, steam; get that sssss sound?"

The hunter said it. He listened to it. He said it again.

"This is a very evil thing you have done," at last he whispered, "but it is also a very wonderful thing. The man I killed made a servant of the Fire God and took metals and gave them a sharp edge. That was also evil, but it was wonderful. You work with food, and he worked with metals, and because he broke the Law, he is dead, and if the Old Old Man knew of your work, you also would die. Is there iron in these mountains? If there is, I will stay here with you and learn to make a sharp knife, and teach you, and you will teach me, for it is not good that this thing you have learned should be lost."

"Will you also break the Law?"

asked the stranger in astonishment.

"I will. If this Fire is really a God, then I will die for my sin, but, if He is just a servant, who should fear Him! I shall soon be seventeen years old, and I shall have much to do in life if I live to be an old man. Hurry and teach me. How do you feed the Fire? And what is your name? No, do not tell me. I will give you a new name. I am called More Bear because I am even now a mighty hunter, but you shall be called Fire-Man, because you have made of the God a servant of a man."

CHAPTER XI

DEATH OF THE GRAIN GROWERS

FROM the west, land of the Grain Growers, land of the setting sun and windmills, came pigeons, bearing sad news. The messages were brought to the Old Old Man as he sat stately and dignified on his golden chair. Each pigeon brought a few words. The entire story was told by putting these words together. It was read to the Old Old Man.

"We are being killed by a new race of men. Our fields are destroyed; our men torn to pieces; our windmills torn down. These men are big like lions, and as many as grasshoppers from the western mountains. Now, our Center is swarmed on, and soon we shall all die. The White People are few. Warn all of them, or soon all the Centers will be as ours, the stones torn apart and our bones among the stones."

"Leave me," the Old Old Man commanded, "and come back tomorrow. I want to think over these things."

The next day he commanded that carrier pigeons be sent to all the Centers, ordering the Old Men to come as rapidly as possible to him.

Then he waited. There was nothing else to do.

Compared with others in the race, he was not a highly educated man. He had a sufficient degree of native intelligence, but not very much learning derived from books or attendance at one of the small colleges of the country. Most of his life he had lived in the mountains, hunting. Now, as the Old Old Man (simply because he was the oldest of the Old Men), he felt the responsibility of making decisions affecting the very life of his nation. He decided to send for the college man who had the greatest reputation for the wisdom of books, and to talk with him while waiting for the Old Men to answer his command.

One of the Centers had gradually grown into a service station for information. Just as there were Centers for grain growing and clay working and animal industries, so there was a center for learning. Any young man or woman showing unusual mental ability could visit one of these houses in this special Center and stay as long as desirable. In fact, he could make it a permanent home if he showed teaching ability. There the books and instruments of the White People were collected.

Know-More was not the Old Man of that Center, but, of all the learned men in the Educational Center, he was credited with being the man who had the greatest general knowledge. In three days, traveling in a litter, carried by young men, he came to the Temple where the Old Old Man awaited him. There was little ceremony in the greeting exchanged. The Message carried by the pigeons was given to him. He had already heard the news.

"Who are the people who have destroyed our Grain Center?" demanded

the Ruler. "Who are they and where do they come from?"

"I do not know."

"I thought you knew everything?"

"I do not. This is what I do know. Many years ago we fled from the anger of our Fire God. A few of us were able to cross the great water, and we came here. Long after we came here we learned to write marks on skins and gave to each mark a sound, and, thus, books were formed. In these first books were put what the Old Men remembered of the tales told them by other Old Men. One Old Man remembered more than the others, though, perhaps, he dreamed dreams and thought them memories. They were stories of the past, his stories of the past; so, when we wrote them on skins we called them first HIS STORIES and later on simply Histories. What I know of the past I learned by reading those books.*

"When we came to this land there were no people here. Animals, birds, trees, but no people. And we have never found any signs that there had ever been any people here, no fallen walls of cities or burial places of the dead.

"Since we came across the great water, none of us have ever dared to go back. All we know of land and water is what we have learned by living here. We know of the water towards the rising of the sun. We know there is a lot of water towards the hot lands. This side of the Grain Center there is a mighty river. We know there are mighty mountains on the other side, but no one has ever dared to cross them.

"For many years we have lived here. How long? It is hard to tell,

* This picturesque derivation of the English word "history" is not accepted. It comes from the Greek and means "knowledge." It would be a good thing if all history were real knowledge.

but in our books are written the names of over two hundred Old Old Men who have sat here in this golden chair, even sat here before there was a gold chair. But never has there been word of other peoples.

"Our dreamers have talked about other races of men. Dreamers, not practical men. Perhaps you have never talked to one of them? They use peculiar language. They say again and again, 'I think,' which is simply their way of saying, 'I dream.' A very favorite idea of theirs is this: 'Because we live as a nation, there must be other nations somewhere.' When they are asked to show that this is true, they only reply that they think so. They think that because there are different kinds of animals there must be different kinds of men.

"The thing that has happened shows that for once their dreams were true ones. This race of men have come from the lands of the setting sun. They must have crossed the mountains. They seem to be more like wild animals than like men, because they kill and destroy and tear down. Our grain growers were hunters, but only in a small way. They could not fight with the same skill that others of our Centers could have fought with, such as the mountain people that you came from. The Center in the lion country might have given a different answer in this fight. But perhaps not. The message says that these wild men were mighty in number, even as grasshoppers, and in the Grain Center there could not have been more than three hundred men, women and children. They have been destroyed—their Center torn down. And the grasshoppers move on. Big as lions, they move on. We capture the lions; every year we take sixteen of them to help our boys learn the

pathway to manhood, but they have to be caught in pits, and bound with ropes. Suppose they were as many as grasshoppers? What could we do?"

"I have killed a lion by myself!" was the proud answer.

"I know; but could you keep on doing it all day? And all the next day? and the next? and the next? What if they came at you fifty at a time? Or a hundred in a day?"

"I understand," acknowledged the Old Old Man. "It would be the end of the race. But something must be done. In some way they must be stopped, or the White People die. In your Center you have all the wise men. This is my command. Go back to them and make plans. Use your wisdom. Learn how to kill faster. After all, these strangers are animals and we are men. Up to this time, no kind of animal has been great enough or strong enough or so many that we could not destroy them or tame them. These dreamers! They were able to think of other races of men. Tell them to go on thinking; keep on dreaming, and see if they cannot find a way to save our people. Go at once and get to work. And when the Old Men come to my call, I will send for you."

CHAPTER XII

THE LION HUNTER'S STRIKE

OF all the sixteen Centers there was none more peculiar in its national work than the Lion Center. Their specialty was the capturing of the Saber Tooth Tigers or Lions needed every year for the initiatory services of the Boy Scouts. These animals bred in the warm woods east of the great river. At one time they had been so many that they

threatened the very life of the White Ones. Now, they were under control. For centuries the people of this center had hunted them, not to kill them, but to make them captives. They were kept in a large, natural rock pit, which had only one opening, and that was closed by a great wooden door. Every year four of the largest ones were caught, tied and carried on carts to the other centers.

The men of this Center had no other responsibility. Naturally, they had become great hunters, fearless men, accustomed to dangers, able to take care of themselves. When their Old Man received the command to come to the Temple, he called a meeting of the men of the Center.

"I am leaving you," he said simply, "and I may not come back. We have had bad news. The Grain Center on the other side of the Great River has been destroyed. A new kind of man, large as lions and tigers and as many as locusts, came on them, and before they knew what was happening, our people were killed. They sent the news to the Temple and the Old Old Man sent it to the different parts of our land. When these new men or animals or whatever they are move on, they will cross the river and come to our Center. You must meet them, and, if you can, you must stop them. At the very first sign of danger, send your women and children to the other centers and you stay here and die. Here is my plan."

The men of every Center were accustomed to obeying orders of the Old Men without question. They could give their opinions if they were asked, but, if not asked, they were trained to obey without question or comment. At that time, no one could think of a better plan; so, the orders were taken without any dis-

cussion. Here is how it was carried out.

At once, activities of every kind started in the Lion Center. Weapons were looked over and repaired. Some men worked from day-dawn to dark, making more arrows. Others started to observation trees on the east bank of the great river for scout duty. Two of the bravest were assigned the duty of actually crossing the river and making observations concerning the invaders if this was possible. Food was packed in baskets for the use of the women and children, should they be forced to move from their homes. Catapults were placed on the rocks overhanging the gate of the pit where the tigers and lions were kept. The supply of stone ammunition was enlarged. And every day only half a ration of live food was thrown over to the captive beasts who rapidly developed a hunger that made them only more of a terrible threat.

In a week the scouts came back over the great river with a tale to tell that worried even the stoutest hearts. They had seen these strange, new men, at a distance, it is true, but, at the same time, near enough to secure some idea concerning them. They were not as thick as grasshoppers, but there were many hundreds of them. They were not as tall as a tiger was long, but they seemed to be, all of them, at least a head taller than the largest of the White Ones. They were nearing the river, and, evidently, intended to move toward the rising sun as fast as they could travel. There was little evidence of women or children, but, perhaps, they were in the rear. Even the animals feared them, as all wild life was running away from them.

From the observation trees on the east bank of the great river the

scouts saw them cross, floating on dead trees, swimming, on and on. Little judgment, little intelligence, no effort to make boats or rafts, but simply a dominant desire to get across to the other side as fast as they could. Some went under, never to come up alive, but most of them made the trip safely.

With the far distant vision of hereditary hunters, these scouts were able to obtain some details of the new people. Dark skin, thick, heavy-set bodies covered with matted hair. Broad, overhanging foreheads, heavy jaws, arms too long for the body. Clubs of wood for weapons. These were the general details as seen at a distance, and in a hurry.

The Lion Center was just two days journey, easy walking, from the bank of the river. The roads through the forest, traveled for generations, were distinct and could be easily followed. The scouts felt that there was no time to be wasted, and they ran as rapidly as possible back to their city. Everything was ready there for instant movement. The women and children started at once on their journey to the eastern Centers, accompanied by the Boy Scouts and their Scout Master as guards. In less than a day the entire beehive was empty. There were, counting the old men, only ninety fighters left, and when they departed from the city it was simply a honey-comb of empty rooms.

To the right of the animal crater rose a lofty pine tree. It was so large and so old that it seemed as though it had always been there. The swiftest runner of the Center was assigned duty in that tree as observer. That left eighty-nine men to fight. Nine men were detailed to act as decoys. That left eighty fighters on the wall of the lion den, hidden in the brush

above the great wooden door. As they worked there, preparing the stones and the catapults, one of the old men sighed and died and that left seventy-nine.

Seventy-nine against a thousand, perhaps against two thousand!

Meantime, below them the hungry animals paced restlessly in their prison. Great, beautiful, powerful beasts that knew only two laws, those of the killer and the killed. Now and then two would reach the maximum point of irritation and spring at each other, but mostly they remained separate. They longed for freedom, the lost right to stalk through the forest, through the tall grasses; the right to kill and eat and sleep. Knowing little, they still knew that they were prisoners, deprived of liberty. They resented it.

Down the beaten roads the strangers came like a flood, like a stream of fighting ants. There was little discipline, little intelligence, but still such a combination of fearlessness and brute strength that they would make almost irresistible foes.

Suddenly before them they saw other men, white men, who shot sticks at them, tipped with sharp stones, which passed through their bodies and made them fall, bleeding and dying, on the earth road. With cries of rage, the front ranks started to run after these white men; the movement of the entire mass changed from a restless walk to a swift trot. Down through the forest they chased the men who ran before them.

It was autumn, the woods were colored with every tint of golden, brown, purple and green. Through the air the dead leaves showered like a multicolored snow. The white men running ahead were silent; the dark men pursuing them howled and yelped

like a pack of hunting dogs after deer.

Suddenly the nine white men came to a ravine, bordered on each side by tall ledges of rock. At the end of the ravine was a gate.

CHAPTER XIII

THE DARK ONES GO BACK

TWO weeks later the Old Men were gathered together in conference with the Old Old Man before the altar of the Fire God. They had talked for one whole day. They had listened to the words of Know-More. At the end of the day there seemed nothing more to say, and little more to do. They waited for news from the Lion Center.

In came the messenger from that Center. He was thin and showed the fatigue of constant running. In his right hand he carried a basket of woven reeds; in his left hand his battle ax.

"I have come to make my report," he said slowly.

"You and your words are welcome. But, first, you must eat. Bring him wheat cakes, and some fresh meat and juice of the grape."

The fifteen Old Men watched him as he ate the food. On the altar the Fire God burned. Except for the crackling of the blazing wood there was no sound. At last the warrior looked up.

"I am ready," he said. "The food was needed."

"Speak!" ordered the Old Old Man. "We are anxious to hear."

"Before Our Old Man left us he gave us his plan for our conduct, and that plan was followed in every-way. We prepared the women and children to leave the Center. We sent scouts to

the great river. Two of them crossed the river. On the hills above the lion- and tiger-den we prepared for whatever was to come. At last the dark men crossed the river. Nine of our men met them, killed a few with arrows and then ran before them. Thus, the dark ones were led to the mouth of the animal den at the end of the dark ravine. There they turned and started to fight. There were so many of the wild men and they were so anxious to fight that the entire little valley was filled with them. At the right time we raised the door of the pit and the men of our race who were alive ran in, followed by the dark ones.

"Those in front saw the tigers, but they could not go back for the press of those behind them; so, they went on. We started to hurl stones at them, with our hands and with the six catapults we had ready. Then, when we saw that most of them were in the trap, we came around and fought those in the rear who were beginning to wonder what was the matter. We shot all of our arrows, and then we fought with spears till they broke, and then we used our battle axes. In the animal-den the lions and tigers were killing and being killed. Those dark men were big and they were strong, and they did not know what it was to be afraid.

"They had nothing but their hands and clubs, made from branches of trees. Afterwards, I found that they did not know the making and use of any of the weapons we had. How they did it, I do not know, but in the end they killed everyone of those beasts. I found one man dead, with his body ripped, but he had his great hands around a tiger's throat, and he had killed the beast by keeping him from breathing. So, it was a great fight. I

and no one else ever saw a greater one.

"Our Old Man had told us that if we could, we must kill them all. And there were just seventy-nine of us to do it. Of course, the animals helped, but when they were all dead and our men were all dead, there were three men still alive of the dark ones.

"So, I came down the tree. I was there to watch what they did so I could bring the word to you, but, at the same time, I remembered what the Old Man said; so, I came down the tree as fast as I could. Two of the dark ones I killed with arrows, and then I went at the last one with my spear. I ran it through him, and he simply broke it off, tore it out of his body and kept on fighting. So, I finished him with my battle ax, and here is his head in this basket. I thought you would like to know what they looked like."

He opened the basket, took out the head and handed it to the Old Old Man. He took it in his hands.

"This is an animal," he said simply. "Look at the teeth."

"It is not an animal," countered Know-More. "It is the head of a man. Look at the head bones over the eyes."

"What difference does it make?" asked one of the Old Men. "The messenger says that they are all dead."

"They are!" said the messenger briefly.

"Then the nation is safe!" cried another Old Man.

"You speak like a child," cried the Old Old Man. "These fighting men are killed, but what of the females and the children? It is true that in this fight a great number of the dark men were killed, but what of that? Beyond the river are the seeds for another great army of enemies, and what is there back of them? One day

I went to the great water, and I saw a tall wave come into the shore, and, when it hit the shore, it broke, and that was an end of all that water and all of its strength. But, back of it, came other waves and still more, and all day I watched them come and break, and each one carried sand back with it. I knew then that there would be no end to these waves and that, day by day, the sand would be torn away till there would be no more sand.

"And I fear for the White Ones who are few in number. I fear that back of this mass of dark ones there are other masses, just as there were more waves. Perhaps even now they are crowding through the mountains where the sun dies every day, far to the west. They will come on and on, and each wave we will break as we did this one, but, in the breaking, we will lose the sands of our nation till at last there will be no nation left, and all this country, we love so much, will be run over by these half-men. Our Centers, our knowledge, our books, and clay vessels and stone buildings and all the things it has taken us so many years to learn to make will be torn to pieces and trampled in the dirt by these half men who will not be whole men like we are for many hundreds of years to come."

He turned restlessly in the gold chair and faced Know-More.

"I sent for you days ago and told you of the danger our people faced, and I told you to talk to the wise men and not to sleep day or night, not one of you, till your wisdom showed us how to save our people. What is your answer, Know-More?"

"Nothing. All of our men simply say that nothing like this has ever happened before; so, they cannot tell how even to start finding safety. We

know a great many things, but how can we know about the things that have never happened?"

The Old Old Man frowned.

"Our Fire God is angry with us. This calamity has been sent as a punishment on our people. Somewhere in our land, the path has not been followed. But I expected better things from you, Know-More. Your talk is the talk of a frightened child. I am not sure of all there is to be done, but of some things I am sure. Messenger! What is your name?"

"Fleet-foot."

"Have you ever departed from the Path?"

"Never."

"Then, obey me. Take this head of the dark one and place it on the Fire God. That is a sacrifice. It represents the kill you helped kill. Now, take your battle ax and kill this man, Know-More, for me, and place him on the Fire God as a second sacrifice. Obey!"

There was no hesitation. The ax swung in air, and, before any one could realize just what was happening, the body of the dead professor had been placed on the head of the dark one.

The Old Old Man stood up and bowed before the altar.

"This is our sacrifice, Mighty Fire God. We give you the head of a dark man and we are sorry we could not bring you all the heads, but the distance was too far, and there was but one man to carry, and he was weary. We give you the body of Know-More, who was of all our learned men the most learned, but, in our time of distress he became a frightened child, and all of his wisdom did not permit him to help us in our hour of need. So, he was useless to our nation, and, thus, was an easier sacrifice for us

to make, than to give you even our poorest fighting man."

He sat down in the gold chair.

"Old Men," he said sadly. "This has been a great day in our nation. When the record of this day and the story told us by Fleet-foot is written in our skin books, called Histories, our children's children may question just how great our nation really was. Return to your Centers, and try to find an answer to these things. If any are found who have angered our God by departing from the Path, bring him here for a sacrifice. I do not think that there will be any danger for a while, and for a year, maybe two years, the dark people will think twice before they cross the great river. Care for their women and children. Their men were brave men. Of them all, only their Old Man and Fleet-foot live on. But in another spring their Boy Scouts will give us more men. Go back to your Centers and leave me, for I am very tired."

And on the altar the Fire God ate the head of a half-man, part of a race that in thousands of years might become whole men. It also ate the body of Know-More, most learned of his race, the man who knew so much that when he was needed to guide his nation, he could only say that he knew nothing.

CHAPTER XIV

THE IRON KNIFE

THE Old Old Man was right in everything he had said concerning the immediate future. There were other groups of dark men behind this first group, and they, following in the path of their leaders, swam the river, went down the dirt road and soon came to the place of the battle between the White Ones,

the animals and their fellow half-men. What they saw there did not please them, and they went back over the river, and, from then on, all the dark men went down the country between the great river and the western mountains, but none crossed on the other side. They went farther and farther to the south till at last they came out on another continent, and they spread over that new land, till they, in turn, were wiped off the earth as a child wipes chalk off a blackboard.

In this way they no longer became a source of great danger to the White People and their civilization. The stand made by the men of the Lion Center, the clever plans laid for battle by their Old Man, served the double purpose of temporary protection and future safety. The result would have been different if the invasion had been directed by a higher grade of intelligence, but the psychology of the dark people was not sufficient to cope with the temporary check on their tribal movement; so, they slid down the west of the river, and, for the time, peace and safety came to all those on the east side.

More Bear and Fire-Man lived on in their cave. They saw no one; thus, knew nothing of the destruction of the Grain Center and the fight of the Lion Men. Rather happily, they worked on in the cave, the one learning new ways to harness the breath of the Fire God and have him cook foods in new ways, and the other making repeated experiments with iron, heating and pounding and shaping the metal into shapes which he thought might be useful to his people.

The things he made at first were crude, ugly pieces of metal, not nearly as beautiful or as useful as his weapons of stone, but, week by week,

and month by month, he became more expert, and finally made a knife that would really cut, a hammer that would crush the hardest stones, and, what he was really proud of, a metal needle. All through these months of wandering, months of cave living with Fire-Man, More Bear had never forgotten White Pigeon, the girl he hoped some day to marry. The needle was for her, to sew with, to make the clothing for both of them and maybe for the baby he hoped to have.

"This work with iron is very interesting," he explained to Fire-Man. "Of course, you are more interested in steam, but at night I cannot sleep, because I have so many dreams of just what can be done with hard iron, if it could only be worked like clay or wood. Take our carts for one thing. We can make a cart, and, with a great deal of trouble, we can finally make two round things which go around and around and carry the cart. You have seen them, but the wheels break; they wear out. Suppose the wheels were made of iron instead of wood, or had a ring of iron around the wood. Then the wheels would last a long time, and, perhaps, the cart would go faster. That is just one idea I have. Here is another. When we want to make something big out of wood, we have to take little pieces and bind them together with cords of grapevines or leather. Let me show you something. Here are two pieces of bark. I found two pieces that are soft and thin. I put them together and push this needle through them, and they are bound together. Suppose I had a lot of needles, shorter and heavier than this is, and I should take two pieces of wood and pound those needles through them. I should have one piece of wood instead of two.

"Just that thing means something

to me. Do you know what they told me at college? I met a man there, called Know-More. This man says that when our people came across the great water they came on logs, trunks of trees, tied together with leather ropes. I went far down into the hot country, and there came to a fishing Center, and those people were still going out on logs, only they dug the centers out so they could sit in them and push through the water with a flat stick.

"I talked to many of their young men. They took me out on their logs, which they called boats. They showed me the sails. They were all sad, because they wanted bigger boats. They said that if they could only shape pieces of wood and could hold them together in some way, they could make bigger boats and go places in them!"

"Why do they want to go places?" asked Fire-Man.

"Because of their hunger for the unknown. You came here, because you had a pain inside you and you wanted to cure you of that pain; even so with these fisher men. They have a great hunger in their heart to see what is far away over the water; yet, in the little boats they have, they cannot go far, hardly out of sight of the land. They know of boats and the shape they must be to go fast through the water, and they know of sails. Man, they have even put sails on carts and they make them go on land on long pieces of wood for their roadway. Now, I can give them what they want. Sharp pieces of iron that they can work with to shape pieces of wood, and little sharp pieces of iron that they can drive through the woods to hold them together. Try to see what it means. It means a large boat, large enough for ten people to live in, with much food, and in it these ten people could go to a new land,

away from the Fire God and the Old Men."

His voice sank to a whisper.

"That is it. A place where fire could be kept in every home. A place where everyone could eat the food we eat, prepared by the fire; where we could make things of metal to hunt and fight with and to keep warm with in winter time. Then life might be different; just how different I am not sure, and whether it would be better I am not sure, but it would be worth trying. I want to try it, but I do not want to end in the Temple, standing before the Old Old Man to have a spear thrust through my heart and my body placed on the altar to be eaten by this Fire which we know is not a God, but simply a servant of mankind."

Fire-Man looked at him, perhaps a little sadly.

"These are dreams of yours," he said at last, and then, after a long pause, "but of what use are they! You and I know something, but what good is it if we cannot tell the others? Nothing is worth while if you cannot tell others. I know a woman who has a pain inside of her like my

pain, and perhaps, if she ate this food we eat, her pain would leave her as mine left me, but I cannot go and tell her, for then I should die.

"You worked for weeks to make a little piece of iron to take the place of a bone needle, and you say that you are making it for a woman you want to marry, but you go and give that needle to her and tell her how you made it, and she will see you dead and she will have to go on sewing things with bone and marry a man who uses stones on the end of his arrows instead of iron as your arrows are ended. So, we live here, two young men in a cave, and we have to decide between forgetting all we know and going back to the women who love us, or finding new ways of making fire serve us and staying here in the cave alone. What shall we do?"

"I am going to bring White Pigeon here!" shouted More Bear defiantly, as he grasped his spear and stared around into the shadows, as though looking for some one spying on him and listening to every word. "I am going to bring her here, and you bring your woman here and we will start a new Center and a new nation."

END OF PART I



The Odds are against you

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PROBAK JUNIOR

Daughter of Luna

We are going to be favored by a number of short stories by this popular author and we are glad to begin the series with "Daughter of Luna," which is quite charming.

By J. LEWIS BURTT, B. Sc.

THE STORY-TELLER

OF my early childhood I remember very little other than that it was a period of struggle and difficulty for my beloved parents, but from about the time of my eighth birthday things were vastly changed for me.

At this time my father inherited a small ranch away in the wilds of the majestic Canadian Rockies, and with it a sufficient sum of money to provide for the needs of the three of us (I being the only child), and a couple of years later my mother also received a legacy which, together with father's inheritance, meant comparative luxury for us.

Both my parents, being educated people and realizing the value of real education, took great pleasure in giving me such instruction as they deemed of the greatest value. So, even if we did live an isolated life, we missed none of the benefits of civilization and were spared much of its sordidness and misery.

Our nearest neighbour was a strange old man who lived alone in a cabin about a mile from our ranch. A strange old gentleman he was. Unlike the average old bachelor of the wilds, this man lived in reasonable comfort, scrupulous cleanliness and general intellectual activity.

Most of the neighbours described him as "queer", and, I think that most of them were a trifle afraid of him, some of them indeed regarding him almost as in ancient days the necromancers and wizards were regarded.

In actual fact, however, he was totally unlike the common conception of him. He was, as I who knew him well soon came to realize, a man of uncommon knowledge and wisdom, and who was now content to pass his remaining days in quiet peace and solitude.

How old he was not even I could discover. Perhaps he was not really so ancient as I imagined, for to a child even moderate age seems ancient, but there is no doubt that he had long passed the usual span of human life.

Almost from the first the old man seemed to take to me, and within a short time our acquaintance had ripened into one of those deep friendships that are often found between a child and one of great age. To me alone did he open up the treasure house of his memory, and many were the tales, strange and marvellous, yet always somehow bearing the stamp of truth, that he told to me.

Today I wonder whether these stories were literal truth or just fairy-tales, just stories told to teach me the great lessons of life in parable form. Somehow, as I review them, the con-



"Be at peace and fear nothing," he greeted me in English. "You are very welcome."

viction of their actual and literal truth grows upon me, but proof I have not. Perhaps in some future existence I shall know for certain what here I can only take on trust.

For this reason, and in the hope that some lonely soul may find in them a few hours diversion, I have selected the more striking of my old friend's stories, which I have arranged in something approaching a chronological order and written down to be printed.

May you find enjoyment and entertainment in them.

Here is his own story, a story utterly fantastic and impossible, yet one which is absolutely true in all its details. Yet still, I wonder.

“I WAS left an orphan when very small and was brought up in an educational institution of the best kind, my parents having left me enough in trust to give me a modest income for life. Fortunately for me my guardians were true and honest men and did their best to make me into a useful member of society. So I passed through high school and university, graduating in due time in the somewhat unusual subject of archaeology.

“I was offered a job in one of the great museums, and for many years I was kept employed on various kinds of field-work in different parts of the world.

“The last of these journeys led me into the unexplored wilds of the Matto Grosso in South America, where I had been sent to search for a possible ruin of a gigantic city which rumour and native legend persisted in claiming was hidden and perhaps buried in the depths of the jungle—a strange city apparently, one not built of stone like most of the ancient works, but a city of shining and untarnishable metal.

“Our journey through the swampy forests was not different from the usual run of expeditions. We had our troubles, but they were all such as we had become used to, until, when we at last drew near to the indicated location, my native porters deserted me, taking with them practically all my supplies and all of my equipment.

“I cannot really blame them overmuch. After all they were only primitive people and the power of their ancient tabu was to them something to be feared even far more than death. To them the trespassing on the forbidden ground meant inevitable damnation for both time and eternity, and none of them could face that prospect.

“What to do now? That was the immediate question. To go back alone was impossible, the way was too long and far too difficult. To go ahead did give me a chance of eventually winning through to the mountains and so to the Pacific Ocean.

“So, having little choice, forward I went. For a whole week I trudged on, mile after mile in utter loneliness, husbanding my meagre supplies as much as I could, sparing my strength wherever possible, yet never delaying unnecessarily, for well I knew that I must win through without delay or not at all.

“I think it was the ninth day after my porters had gone that I stumbled on it. It was nearly high noon and I suppose I was somewhat sleepy with the heat. At any rate I tripped over what I thought was a stone and fell down.

“As I gathered myself up I noticed that the supposed stone had a peculiar sheen, and so I stooped down again to examine it more closely.

“Then I knew, knew beyond question that my journey had not been in vain, for this thing was no stone, but

a part of a broad metal pavement or road leading onward in a dead straight line into the unknown distance.

"I must have been travelling on it for some little time, for as I took stock of my position I discovered that I had for some distance been travelling in an exactly straight line, and exactly in the line of the roadway, which I suppose had been the easiest path. Only the accident of the road being cracked and broken at that particular place had caused that fortunate fall. Or was it an accident?

"Naturally I followed this remarkable road, for was it not the very confirmation of all my hopes? And so, at the end of five days more of my wearisome plodding—though now that faint hope had become clear certainty the weariness was no longer noticeable—I came at long last within sight of the legendary city.

"At first sight there seemed to be nothing but a slight rising of the ground from the centre of which rose a somewhat squat tower. As I approached, however, this was soon to be an illusion due to the distance of the city, which must have been at least twenty miles away at my first glimpse of it.

"In reality the city consisted of a huge ring of buildings, all of the same white, lustrous metal as the roadway, all of them colossal in size, and all evenly spaced around the central tower which had first attracted my attention.

"This last was indeed a gigantic structure. In spite of its squat appearance it proved to be well over a mile in height, the squatness being due to its great diameter, which must have been about three-thousand feet.

"Imagine my feelings when I finally entered the precincts of this remarkable find. Here was I, actually stand-

ing amid the greatest archeological discovery of all time, a discovery whose significance even I could not imagine. And here was I stranded without a single note-book, without a single camera, without even the simplest means of recording my discovery.

"Think of it! The greatest find of all time, and yet, even if I did succeed in returning to civilization, I could not bring back with me one shred of proof. And proof, as you well know, is the only thing that will convince the learned ones of the world.

"No, if I ever did get back I must either take back with me some very potent evidence or else—be laughed at as a charlatan and a faker.

"What a prospect!

IN spite of my excitement, since it was near sunset when I reached the confines of the city, I restrained my desire to explore further that night and camped where I was till morning. But, believe me, I was up and ready with the first rays of the dawn.

"All that forenoon I wandered about among the buildings, and the more I did so, the more mystified I became. Every one of the buildings, some of them obviously dwelling houses, others probably ancient factories or public buildings, was either absolutely empty of either fittings or furniture, or else was so tightly *welded* up that no possible means of access remained.

"After a short rest during the hottest part of the day I resumed my explorations, this time turning my attention to the great central tower. I had with me water and fruits sufficient for about three days' nourishment and so I determined to remain in the tower—provided I could enter it at all—for that period. To make even a cursory examination would, I knew, take some days, for not only was there

a vast area to be explored on the ground level, but there was also a possibility of my finding some means of access to the upper part, and this meant the probability of a considerable amount of stiff climbing of either steps or ramps.

"I walked perhaps two-thirds of the distance around the tower before I discovered an entrance, and I was beginning to fear that this, like so many of the other buildings, would prove to be tightly sealed. However, at last I came to a door set in the sheer wall of the tower, a door that was of a size that seemed to indicate that it had been built for beings at least similar to myself. And strangest of all in this strange exploration this door stood invitingly open, the interior of the building, so far as I could see, being quite clean and apparently showing no slightest sign of decay.

"I entered, finding myself in a great corridor of the white metal, a corridor reminiscent of some I had seen in other ancient buildings in various parts of the world, save that it was constructed of this metal instead of the otherwise universal stone blocks.

"I had gone perhaps fifty paces along this corridor when suddenly I saw that I was not alone. There before me stood a man-clad in a single white robe. A man did I say? Yes, but what a man! Never had I seen so glorious a creature. Were the old stories of the gods true after all? And was I actually standing in the presence of one of them? Surely it could not be! And yet there he stood before me, his fine, shimmering robe falling in flowing folds almost to the sandals on his feet, his glorious golden hair falling in waves about his shoulders, the radiance of glowing, youthful health emanating from that benign face of his.

"'Be at peace and fear nothing,' he greeted me in English, 'You are very welcome. I have watched for your coming for many days.'

"I acknowledged his greeting with some kind of a reply, though what I said I scarcely knew, so amazed was I.

"'Come,' he said and, turning, led the way down the corridor to a small alcove some six feet square.

"There he pressed a small stud and immediately a section of the wall behind us closed in as though shutting us into a box. To say that I was startled would perhaps be less truthful than you might expect. I had by now got beyond the stage of being surprised at anything. And then, too, I was still mentally occupied with the marvel of this strange man's appearance, and also with the strange phenomenon of the all-pervading light, soft yet sufficient, that filled the whole tower, though there did not appear to be any detectable source from which it emanated.

"The mystery of the box-like chamber was soon solved for, almost at once, my guide pressed another stud, which action was followed by the unmistakable sensation of being carried upward in an elevator.

"Our upward journey must have been taken at a remarkable speed, for within a very short time the lift stopped, the door opening silently, and we stepped out into a sort of cloister at the very summit of the tower.

FOR two days I rested, being given every possible comfort and convenience by my remarkable host who, with a graciousness and courtesy rarely to be met with among our humanity, anticipated and attended to my every want.

"This for me was the beginning of a new life.

"As soon as I was well rested my host, Imar by name, told me that he had had my expedition under observation for several weeks, and that it was he who had frightened away my bearers and guided me alone to the city. He explained that he was the guardian of the tower which, as I afterwards saw for myself, was one mass of indescribably complex machinery, the purpose of which was interplanetary communication.

"He himself was a native of one of the planets of the star we call Sirius, and had served his apprenticeship with the Lords of Venus, a humanity which has progressed, so he told me, further than any other in our part of the galaxy.

"His age, he stated, was about three-thousand earth years. Yes, lad, *three-thousand*. I remember the amused smile with which he greeted my look of incredulity at this statement. Actually he looked about twenty-five or thirty, so my disbelief was not to be wondered at.

"I asked him:

"If you are so young at the unbelievable age of three-thousand years, how long do you expect to live altogether—or are you actually an immortal?"

"His reply was characteristic.

"My friend, I can well understand your puzzlement at my statements, for your humanity, through its foolish methods of living, has so reduced its own span of life that a normal lifespan must seem beyond all credence to you. As to my immortality, I must qualify my answer. In actual life I, like yourself, am immortal. Our real life never can be taken from us. This I think you understand quite well. On the other hand, as regards this period of existence in this body, again as with yourself it is only a temporary thing,

a means of expression of the personality for a time. We who have for long ages learned the true way of life, do not destroy our bodies every few years but keep them intact and perfectly attuned until we have finally done with them and can lay them aside for better ones."

"How long, then, do you expect to live—that is, I mean, how long do you expect to continue as you are before your transition to another phase of existence?"

"Again he smiled at my clumsy method of expression.

"About a hundred-and-fifty or two-hundred thousand of your years, I expect," he replied in a casual and scarcely interested tone. "Until I graduate, of course."

"For some ten years I lived with Imar, learning something of his wisdom, gathering knowledge such as is not given to most of our race to learn. Yet, for all his marvellous kindness and generosity, I could never quite rid myself of the feeling that he really only kept me as a sort of pet around the house.

"He told me much of conditions on other worlds, of the social systems in use, of the varying stages of development of the different branches of humanity, and in the end, as I learned of the progress of so many of these races, I became filled with a sense of shame for our own race with its so much vaunted civilization and culture, a culture which, after all is said, consists to a very great extent of graft, greed and meanness, so far as the general run of mankind is concerned.

"After this period of years Imar called me one day and said to me, 'For the next two or three years I shall be unusually busy and shall have very little time to give you. Perhaps you would be interested in studying for

yourself the records of the long history of your race.'

"Of course I expressed my eagerness to do so, and he continued,

"Very well then, I will send you.'

"On my inquiry as to where the records were and how I should get to them he made the astonishing statement,

"The records are kept in the great library of this solar system on the planet Venus. In a few days a space-cruiser will call here on its way back to Venus from Sirius. They will take you and, in due time, bring you back.'

"A few evenings later he told me that the ship would arrive during the night and that I would be sent with it. He took leave of me, saying that he would not see me again before I left, and that I must go to bed and sleep as usual.

"This I did, having learned that his advice was always wise, and to my utter bewilderment, when I awoke I was no longer on earth, but had already reached that distant planet that we call the Morning and the Evening Star.

"There I was installed in a room in the Hall of Records and shown the earth section and the methods of operating the machinery for the interpretation of the records. (These were in the form of a kind of sound-sight interpretation through an extremely complicated mechanism, and were given in the Galactic language that is used between worlds, a language that Imar had taught me to speak very fluently during my years with him.)

"All the stories I have told you, lad, are taken from these records and they constitute a digest of the outstanding events of earth's history. Twenty years and more did I spend in this study—the most marvellous and fascinating years of my whole life—and

yet I had little time even to glance at the histories of other planets. One needs a lifetime such as that of Imar to get to know more than the surface of such knowledge.

"Then one day I was told that I was to return to earth, and a few days later I woke up once more to find Imar bending over me and welcoming me back to our home planet.

"I stayed with him for another year, asking countless questions, questions which he never tired of answering. But never would he teach me any greatly advanced knowledge of the sciences, physics, chemistry and the like. He always insisted that earth's peoples already knew too much for their own good. He insisted that they are not yet able to use their present knowledge for the good of the race, but he did assure me that, once greed and selfishness, the spirit of competition as he put it, had been eradicated from our make-up, the Elder Brothers of all the humanities would be ready and eager to aid our progress as fast as we could learn.

"Again the day came when Imar told me that I must go back to my people. He told me that a place had been prepared for me away in the Rockies, and that I would be taken care of for the rest of my life. He told me on no account to try to take up my old life again as nobody would ever believe my story. He warned me that, should I attempt to convince the world of the truth of it all, I could expect nothing but incarceration in an asylum for the insane, even if I escaped a worse fate.

"So Imar took me in a small air-ship and dropped me in this place, leaving with me enough minted gold to last me for a year. Whenever I need more I press a button in a little box he gave me and talk into it, telling what I

need. Next morning I find another bag of money, or more often of gold-dust lying there on my desk.

"So Elmer Fergusson, who disappeared years ago into the Matto Grosso, remains lost for ever. I had my estate willed to the museum which employed me, in case I should not return within five years, and so I have nothing left in this world to struggle for.

"The history I have learned and the knowledge I have acquired have been an undying source of joy and gratification to me, but it is utterly useless to others since it runs so diametrically counter to every accepted belief and doctrine.

"So I'll take this knowledge with me, all except the few fragments I have given to you, lad."

DURING my second year at the University my mother wrote me that my old friend had passed during the winter and that his cabin had been mysteriously set on fire while his body was being buried in the village cemetery.

Did he actually go to Venus? Did he actually spend years in the company of a being such as he describes Icarus to be? Or was it all the imaginings of a very old man? Was it the dreams he had dreamed in the course of a long life of thought and meditation? Or was it just plain fairy-tale?

I don't know, yet somehow, strange as they sounded, these stories always seemed to carry the ring of truth, and I often wonder, *could one possibly imagine* such things without some truths to build up on?

THE origin and age of our Earth have always been a puzzle to both geologists and astronomers. For one thing, in spite of Earth's tremendous age (generally put at

about two-thousand million years), it is still known to be almost a baby when compared with its great mother the Sun, and there is also considerable reason to suppose that the other planets of our system are themselves much older than ours. Why this should be, no one has ever attempted to explain, the evidence, such as it is, being merely put aside as unreliable or negligible, for men of science never seem to overcome that little weakness of theirs, the tendency to ignore or to scoff at such things as disturb their nicely worked out theories, and certainly the idea that our Earth is younger than her brother planets doesn't fit in with the accepted theories at all.

The fact remains that there are facts and phenomena that are unexplainable by any theory other than that our Earth is the baby sister of the solar family, which does seem to give credence to this, the earliest of the old gentleman's tales.

According to him, this is the story of Earth's beginning as recorded in the great library of our solar system on Venus.

I warn you, however, do not read it unless you have imagination, or I fear you will find it somewhat lacking in interest.

THE third planet of our system, the satellite called Luna, had reached the end of its useful life. No longer was it habitable for either plant, animal, or man. On it races of men had been born, matured, passed away. Most of its peoples had followed the normal course of human development, but still there had been a few, as there generally are among the inhabitants of any world, who had risen to heights of glory undreamed of by the majority of their fellows.

Some of these had, as the result of their own attainments, been accorded a rightful place among those lofty Beings whose mission it is to direct the course of our system, those high ones who serve the Supreme Creator as 'Builders of the Systems.'

As we said, the satellite, Luna, had reached its end. Speaking in common parlance it was 'worn out.' During the course of ages its seas had seeped into the interior of the globe, or else had evaporated into space. Its atmosphere had been either diffused away into the void or else had been 'fixed' by chemical combination into the very substance of the rocks themselves, and no longer could the ancient world support even the last remnants of its living creatures.

Those of its children who had attained to the high office of Builders looked with sadness on their beloved world. Could nothing be done to regenerate the old globe? Would not some means be devised for revivifying their old home? Or must it gradually sink lower and lower until at length the very last traces of life should have disappeared from it for ever?

The world was needed too. Without it the Solar System would become undesirably crowded within a measurable time (by which we do not mean a short span such as is measured by our human ideas, but a short span measured cosmically—say a period of the order of millions of years). Races were developing, which would need room to expand and continue their progress unhampered by cramped conditions, unretarded by close contact with the unprogressive drones of even their own races.

Left-overs (if we may use such a term), the unprogressive fractions of more advanced races, needed to be segregated so that they would not re-

tard the general development. These two differentiated types needed different worlds for their habitations. Two worlds at least would soon be needed, and with Luna useless, there remained but one, the fourth planet, which we of Earth now call Mars, a world already far advanced in its life-span, but which had yet a long period of usefulness before it.

The Builders from Luna bent their energies towards the discovery of a solution to the problem. Every possibility was examined; every thought that might apply was amplified and worked out to its conclusion. And at last the answer appeared. Or rather, we should say that two possibilities confronted the Builders, between which they found themselves unable to decide.

In this dilemma they approached the Master Builders themselves and put the question before them.

"My lords," the leader of the Lunarians began, "The problem of Luna appears to offer two possible solutions, between which our wisdom is insufficient to decide. We bring the problem to your Lordships, that your greater wisdom may be applied to it."

They then presented their problem as follows:

As a first alternative the planet Luna could be partially regenerated by a process of surface volatilization. The granites and silicates now composing its crust could be disintegrated, thus setting free the imprisoned gases. Cooling would be rapid and would be followed by the condensation of large quantities of water, the final result being the re-formation of a sufficient amount of moisture and atmosphere to give the planet an increased life of perhaps ten or twenty million years.

In this case it could be used as a habitation for the "left-overs," the

backward ones, during their period of development into a normally progressive race, while the other group, the most progressive, could be transferred from the various planets to Mars and there develop into a single race unhampered by the backward elements, a race that should grow into one of the finest in the system.

On the other hand, Luna could be completely renewed, or rather a new globe could be produced, Phoenix-like, from her ashes, by a process of complete disintegration and volatilization.

The advantage of this latter course was fairly obvious. A new world would come into being which had its whole period of usefulness before it, a matter of billions of years, and on which complete races could come to their full height of development. On the other hand, this plan had the disadvantage of requiring a very long time for its completion. The completely volatilized planet would have to go through the normal stages of cooling, condensation, and the gradual development of oceans and atmosphere before the Builders could even begin to prepare it for the habitation of living creatures.

The Master Builders, recognizing the gravity of the problem, took it in hand and, always in co-operation with the Lunarian Builders, examined it in all its aspects. To these great Beings it seemed only a short time before the decision was arrived at, yet measured by our tiny human units it must have occupied a period of many thousands of years before the final decision was pronounced.

Luna was to be completely rebuilt.

THE removal of such living creatures as still remained on the parched and starved world was naturally the first thing to be accomplished. This was a task that the Builders felt

should be delegated to other and less exalted beings than themselves, not that they were in anyway averse to performing such trivial services, to them, for their whole existence was one joyous round of service in the interests of their system, but rather because they were themselves so far out of direct touch with the individual races of Luna.

So they appointed a group of the more advanced peoples from the fifth planet, that world what was later so cruelly wrecked by the evil passions of its own humanity, to supervise and direct the removal of Luna's last peoples and animals, such few as there were, to another planet where their races could be kept alive until their new home was prepared for them.

Perhaps it seems strange thus to be troubled about such a small group, but it must be remembered that no race of whatever type was ever created for destruction, and that races and groups, like individuals, are all parts of the immortal plan of the Great Designer. How otherwise, then, than by preserving these remnants could the great plan be preserved intact?

This work done, there remained no further obstacle to the conversion of the worn-out Luna into a new planet, the planet we now call Earth.

Now were forces incredible brought to bear on the barren globe. Powers of which we today have little conception were focussed on her, directed to areas where the disintegration must first be started, for remember this great demolition must always be kept under control. There must be no possibility of any part of that terrific release of power escaping from its own restricted area, for once let those forces escape in their intensity and who could say but that the whole sys-

tem might be drawn into a flaming mass of universal destruction. Yes, it might even travel beyond the confines of the single system and then, ever growing and feeding on its own energy, might cause unimagined wreckage throughout the very galaxy itself.

And we must remember that, mighty as were these Master Builders, yet they were far from being omnipotent, and such cosmic powers, once unleashed, might easily overwhelm them in catastrophe.

So the forces directed towards Luna were carefully regulated, only such power being applied as would serve to start the disintegration of some of the less stable atoms. Yet, even so, when, after the long-continued play of these forces, the reaction did commence, it developed with such rapidity and violence that even the Builders themselves began to fear the possibility of a catastrophe. This we know from the ancient Solar Records passed down to us. Yes, even those Great Ones knew their moments of apprehension—fear in our sense of the word being, of course, impossible to them—and more than once during these first days did they stand ready to check, to stop entirely if need be, the work they had started.

Yet, once the first rush of force had developed and the controlling forces had been built up into a single unit of resistance, the disintegration could be allowed its way, the controlling resistances being then automatically intensified by the very fires they were built to check.

So, within a space of only a few months Luna had blazed out into a new star of wondrous glory, one more “nova” for the delectation of the watchers on other systems, one more world sent out in a flaming, blazing

death that was but the birth of a new glory.

The disintegration proceeded until all but the very core of the planet had become a whirling ball of incandescent gas, a world now vastly larger than before, a world that from its brother planets appeared as a new sun complementing the radiant central globe on which their whole system depended. And here again was another danger. The heat and other radiations sent out by the new “sun,” streaming out into space as they were, could not leave the other worlds untouched. So not only was the actual conflagration guarded and watched lest it spread too far, but the other planets—Mars and Venus in particular—had to be shielded from its baneful effects.

Around each of these worlds, on the side facing the flaming Luna, were built up shells of protective forces, shells which, while letting all desirable radiation pass through them, were yet capable of reflecting or absorbing those rays which might be harmful. What these shells were, how they were constructed, what was the mechanism of their control we do not know. Only the Master Builders themselves ever knew the secrets of their construction, even as they alone knew the combinations of forces necessary to cause the volatilization of the planet itself. No beings of lesser attainment could be entrusted with such awful powers lest they unwittingly would wreck the universe.

When about seven-eighths of Luna’s substance had been thus gasified the process was checked. The Master Builders needed a solid body near at hand to act as a sort of fulcrum against which forces could play during the next stage—the first formative one. And what body better than the core of the old planet itself? There

it was, right where it was needed. The new world would still be quite large enough without this remaining matter. In fact the rejection of this portion would probably make the new world even more satisfactory than the old one had been, even more suitable to the types of life found in our system.

So the central core was left intact, surrounded by its huge envelope of fiery gases.

THE next stage was the separation of the gases from the solid core, and this was done, comparatively easily, by a sort of artificial tidal attraction, in which the direct action of the sun was made to play a large part. I say "comparatively easily", because the process appears to have been a relatively simple one, but it must be realized that it was far from being a rapid process. In fact the entire separation of the new world from the slag-like core, which itself had become partially liquefied by the heat of its gaseous envelope, was a matter which took thousands of years to complete.

Then came the matter of starting the new world in its desired diurnal rotation, for up to this time its rate of spin had been more or less irregular, owing to the continual changing of the forces playing about it.

It was here that the attraction of the old core, that world we still sometimes call by its ancient name of Luna, came most prominently into play. The formation of a gravitational and rotational centre between the two worlds in this way was an ideal way of stabilizing them both in a satisfactory orbit. The attractive forces of the now satellite, also rendered immense service during this formative period, through the tidal forces set up, an

effect which, even in its present feeble form, is still of untold benefit to our world.

Slowly, fraction by infinitesimal fraction, the great mass of flaming gas took up its orbit, its steady rotation, settled down into a stable sphere, whose pulsations became ever weaker and weaker, until in the course of ages its fires cooled and the white-hot globe of fire became at last a reddish ball of liquid rock, surrounded by a glorious halo of still turbulent gases.

Oh! but what, after all, is the use! No human words can ever express one millionth part of the stately glory and grandeur of that re-birth of the new world from the ashes of the old. You who have so patiently read thus far without finding the fascination of this marvellous record, have yet a little more patience, I beg of you. Full well do I know that my description is almost farcically inept. I know it, yet no words that I can find will ever do justice to the picture. No, not even the faintest measure of justice.

Only in one way is it possible to catch the least glimpse of this sublime cosmic drama. Put down the story, cast aside for a little while the futile words. Then close your eyes, and with the mental eye of imagination picture for yourself your own conception of it all.

If you have no imagination, put the story down—and never again take it up, for never will it reveal its marvels to you. But if you are one of those who are blessed with that power of mental visualization that we describe, for want of a better term, as imagination—if you are of those, then do as I say: Shut out all the trivial things of the outer world. Put out of your consciousness to the very limit of your powers the feeble conceptions your senses have gathered of time, space,

life, and even of the great universe itself.

Now let that imagination have full play. Picture the great unfolding drama from the less limited view of a demi-god, an archangel, whatever great and mighty power you will. Open wide your vision, open it until the very limits of human imagination itself are reached. Then, and then only, let yourself form a concept of the wonder and glory of it all.

Perhaps even then you will catch but the dimmest echo of its grandeur, but I promise you, if you do this, using your powers and abilities to their very utmost, then the picture you will paint in your own mind will be one that will transcend all the glory you have ever before dreamed of. I promise you that from that picture you will gain an unforgettable vision of the majesty and glory of creation, and of its Creator, that will be like a guiding light throughout your whole life.

But, forgive me. I digress.

Aeon upon aeon thus passed while the new world slowly cooled, until in the fulness of time it appeared a solid globe, a world of great oceans, of invigorating winds, of verdant continents, in fact a world such as we know it today. Perhaps in those early days, before the coming of man, Earth was somewhat hotter, somewhat more humid, its atmosphere somewhat denser. Perhaps in those days the glory of the heavens was less visible through the dense cloud-masses that must have filled the heavens. Yet, taken all in all, it had become the Earth as we know it, fit for the habitation of man, fit for his growth and development.

There is no need to recount the details of this "age of preparation" as the Builders termed it. There are innumerable treatises dealing with

Earth's childhood, even if there are none dealing with her birth. Choose whichever of these strikes your fancy, and from it build up your own story.

SO then at last was Earth ready for the habitation of the living creatures that were its destined population. At last the young planet, still watched over and encircled by the now eternally frozen Luna, that satellite whose motherhood had long been forgotten, at last Earth was to be given her children, those races of men which she was to adopt as her own.

Even the selection of these races was a matter of extreme care and complication. From Mars, Venus, and Mercury (a world already approaching her own end), even from some of the greater satellites, were brought the selected ones. In groups of thousands, in colonies of millions, were they brought to Earth, every possible world contributing its quota of its most suitable people.

Most of these people would, to our view, be looked on as primitive and undeveloped—almost embryonic perhaps—and so they were.

What florist, in commencing the development of a better species, would take the mature blossoms and transplant them? Would he not rather take of the best of his seeds, the seeds of those plants which had already shown the greatest promise. And from these would he not, by cultivation and intermingling, produce in the end a plant which contained within itself all the best characteristics of all its parentage?

So it was with Earth. To continue the analogy, Earth was planted with the best seeds of all the humanities of the Solar System. And these "seed-races", if you will permit the term,

were thus placed on a world where every chance could be given them, even as the poorer types were relegated to Mars, whose prime was already passed, but where they could at least have whatever chance of development they were capable of responding to.

Thus it is that on Earth today, even after so many, many ages, we still find that old differentiation. Not even yet have the racial characteristics been fully blended. We still see traces of the ancient variations, yet, in comparison with their beginnings, we may well say that Earth's races are, after all, one race, for such differences as now remain are, at most, superficial.

Perhaps those differences will never vanish. Why should they? Is not

Earth perhaps a better and more progressive place because of those very differences? That is a question which only future generations can answer.

IN such manner, then, was our Earth born, a planet destined for greatness, for the production of a humanity superior to all those from which it sprang, a humanity that shall eventually rise to a height where all shall know themselves as, to quote the words of the great Apostle, "sons of God"—if they will only keep faith with the best that is in them—if not, then who can say?

But does not the prospect inspire? Does it not spur us on to the fulfilment of our high destiny? If so, then be it fact or fable, this story of Earth's beginning is not written in vain.

THE END

ANTS

The Alps have risen, seas have shifted place,
Sahas formed, and Amazons run dry,
Great monsters towered and lain down to die,
Since first the hot young sun beheld your race.
Now when the world grows old, with swaggering pace
A soft-limbed biped rears his mansions high
Where once, beneath the warm Jurassic sky,
You heard winged dragons lash their tails in space.

And ages still shall go. . . . A day may come
When some wise traveler from the stars will view
Your crawling hosts, and cry, "O fortunate clan,
Lords over time! the earth belongs to you!";
While, jutting from the ancient clay and scum,
Stare the white crumbling bones of the last man.

STANTON A. COBLENTZ.

Courtesy of the New York Times

Cupid of the Laboratory

By WILLIAM LEMKIN, Ph. D.

A chemical story, written by a chemist, has two elements of interest to start with and the work of this author always shows a narrative power.

IT seems desirable to state here, at the very beginning, that the reference to "Cupid" might give rise to unfortunate misconceptions, which are hereby promptly and emphatically dispelled. No—this account has nothing whatever to do with love or love-making. In fact, there is not one female in the entire story. It treats exclusively of two altogether staid and serious-minded chemists whose thoughts and efforts were as far removed from women and the unclothed little rascal with the bow and arrows as anything possibly could be.

The matter all came about because they were working with copper—the metal itself as well as dozens of its compounds. If it had been some other material instead—if they had been experimenting with lead or mercury or gold, then the whole thing might never have happened. But no!—it had to be *copper* . . . and thereby hangs a tale as bizarre as ever has been chronicled in the annals of chemical research.

DR. SPENCER made a final hair-breadth adjustment on the control knob. The needle quivered slightly, and presently came to rest. He gazed intently at the small quartz container with its bluish-green liquid standing on the bakelite stage of the ray mechanism. The eery phosphorescence of the liquid became more pro-

nounced under the savage bombardment of ultimate particles of energy.

"What voltage, Burt?" he called briskly, his trained eye still gauging the depth of color displayed by the liquid under observation.

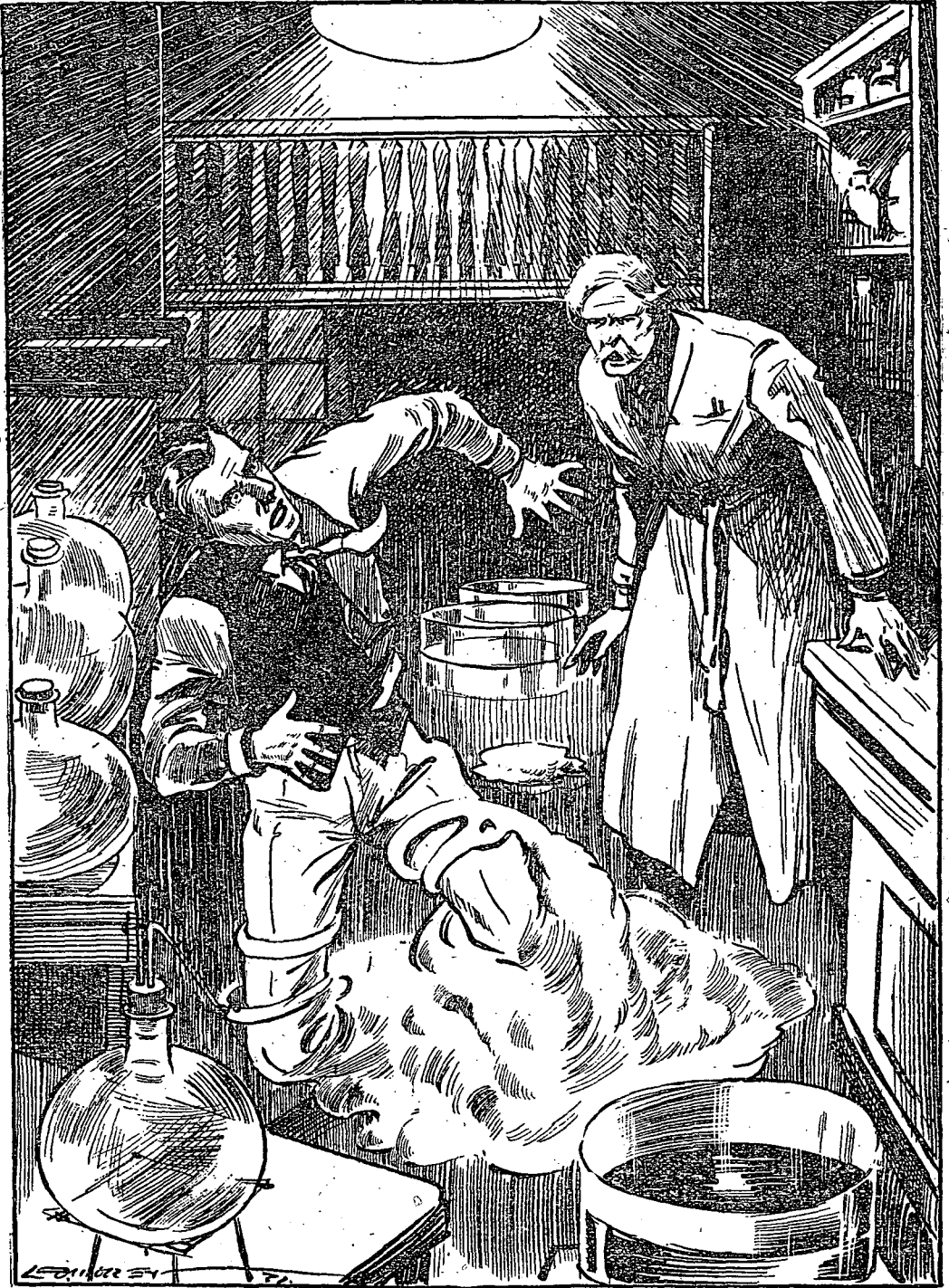
Burt Jordan, his assistant, stationed at the far end of the apparatus, consulted a dial.

"Twenty-two milliamperes," he returned.

"Sufficient," answered Dr. Spencer, and added with a half-smile of satisfaction: "I believe, Burt, that we've got just the right concentration of cupric arsonium xanthate to give us perfect results." He studied the thermostatic device fastened to the quartz container. "With the temperature at 38°," he concluded, "the first changes should be evident in about seven hours."

He rose from his cramped position in front of the humming instrument and consulted his watch. "Whew! One-thirty!" he exclaimed. "I hardly realized it was so late. Well, Burt, we ought to turn in now. Nothing is going to happen until after breakfast tomorrow at the very earliest."

Weary-eyed from hours of constant attention at the energy mechanism, Jordan took the suggestion with alacrity. In a few minutes the unused apparatus had been put away, various odds and ends of scientific equipment had been relegated to their appointed



As neatly as though he had been tackled on the football gridiron, Jordan was swept from his feet and sent sprawling.

places, and the notes of the previous "runs" as well as of the current experiment carefully put away. All that now remained in view was the humming mechanism on the table in the center of the laboratory, with its quartz container of bluish-green liquid.

After a last minute inspection of the queer device, and a final look around to see that all was in order, Dr. Spencer snapped off the lights. The two men retired to the adjoining room, which, together with the work-room itself, constituted the entire internal structure of the small building. It was a mere bit of a chamber, yet it represented kitchen, dining room and bedroom all rolled in one. Tiny though it was, it proved entirely sufficient for their meagre needs. The two scientists were inordinately wrapped up in their work, and animal comforts were of secondary consideration when a problem as momentous as the one they were now tackling seemed to be so near solution.

Conversation lagged noticeably. Both Dr. Spencer and Jordan were tired after a hard day of delicate and nerve-punishing experimentation. A few perfunctory remarks, some brief generalities, and soon both workers were sound asleep.

DR. SPENCER might have thought that nothing was going to happen until after breakfast the following day. However, it did not take many hours to dispel such an idea from his head. To be precise, the notion was dissipated with startling suddenness at 4.33 A.M. That was the exact time of the strange disturbance that roused Dr. Spencer. With scientific, almost automatic exactness, he glanced at the radium dial of his wrist-watch to record the time. Then

he raised himself on one elbow and listened.

The strange crackling sound was repeated. There was no mistaking it now. The noise came from the laboratory. With a jerk the scientist was bolt upright in his bed. The abruptness of this maneuver was sufficient to rouse Jordan on the cot nearby.

"W-w-what is it?" stammered the heavy-eyed assistant.

"There's something happening in there . . . in the lab!" breathed Dr. Spencer.

He was now out of bed, fumbling for the light switch. Before he could locate it, there came a sudden resounding crash of glass through the open doorway leading to the other room. With a half-muffled gasp the scientist was at the threshold in two prodigious bounds. Jordan, now thoroughly awake, was inches behind him.

"Who's in there?" shouted Dr. Spencer into the shadowy depths of the laboratory, and his voice trembled with excitement.

More fumbling for a lighting button, and presently a flood of illumination blazed forth. To the utter astonishment of both men the precious mechanism in the center of the room was *not* smashed to smithereens. It appeared to be just as they had left it—in fact, it was humming away as merrily as when they had made their last adjustment several hours ago. But no! . . . something *had* happened. . . .

"The solution!" gasped Jordan. "It's gone!"

"Gone!" echoed Dr. Spencer, "quartz container and all! . . ."

Again they were wrong—in a measure. A hasty look about served to locate the quartz vessel—at least the fragments of it—lying on the

floor directly under the stand from which it had apparently fallen. But mystery of mysteries! . . . where was the copper solution—the bluish-green liquid of curious phosphorescence with which the quartz vessel had been filled?

Not a drop of it was visible, either on the stand, on the floor beneath, or, for that matter, anywhere else in the immediate vicinity of the apparatus.

"The container must have been dislodged by the vibrations," ventured Jordan lamely, "and fallen off the stand. . . ."

"And naturally the copper arsonium xanthate solution must have disappeared into thin air!" finished the perplexed scientist, with a faint trace of irritation.

By this time both of them were going over the scene of the mystery in minute detail. On hands and knees they groped about, picking up fragments of quartz from the floor, peering under the table and into corners of the mechanism, hunting vainly for a bluish-green liquid which very obviously was not there. Nothing remained of the precious copper solution save some faint blue smudges on a few of the larger fragments of the original vessel. There were also two or three small irregular smears of blue on the wood flooring. And that was all.

"Is it possible," pondered Dr. Spencer, "that almost a liter of liquid could have vanished so completely?"

Jordan was still on his knees amidst the wreckage, probing the colored floor markings with his finger, scrutinizing the faint smudges on the pieces of quartz, sniffing quizzically. "It's got me, doctor," he asserted.

"A precious experiment ruined," murmured the scientist. "But by

what? . . . and what's happened to the solution?"

Dr. Spencer glanced hastily about the laboratory. Nothing seemed to have been molested—everything was in order. He tried the door leading to the outside. It was just as he had left it before retiring—securely locked. The windows likewise were properly fastened. There had been no intrusion into this sanctum of research—that was certain.

Could it have been a cat? a dog? no, they kept no such domestic animals a mouse? a rat? perhaps? Or maybe it was as Jordan had suggested—the steady vibration of the apparatus over a period of hours had gradually worked the vessel loose. Yet that brought them face to face with the same tantalizing question: What had become of the solution of copper arsonium xanthate?

There was no further sleep for Dr. Spencer and his assistant. They dressed hurriedly. Day was now beginning to dawn, dull and gray and ominous. They were determined to get at the bottom of the mystery if they did nothing else the entire day—or as many days thereafter as was necessary to clear up the strange disappearance.

Presently there came action—unexpected and dramatic action. Jordan, standing near the laboratory table at the far end of the room thought he heard a faint rustling nearby.

"There's something in here!" he called excitedly, and reached down to open the doors of the lower cupboard of the work table. Dr. Spencer was seated at the microscope making a close examination of a quartz fragment with its queer smudge. He hastily left his instrument and rushed across the room. The theory of a

marauding animal might not be altogether incorrect.

Just as Jordan had his hand on the cupboard knob there came a crash of splintering glass from within. He swung both doors wide open to reveal the entire interior of the cabinet. Row on row of bottles adorned the several shelves within—bottles that held a variety of reagents and stock solutions. One glance was sufficient to reveal that some sort of being was at large in the cabinet. Although it was now out of sight, the evidences of the visit were to be seen clearly.

"Must be a small animal of some kind," asserted Jordan, surveying the damage. "It's gone and smashed a few bottles, confound its hide!"

BY this time Dr. Spencer was down among the reagents in earnest. He came up presently with an exclamation. Mutely he held up an unstoppered bottle. The label read: *Copper Sulphate—CuSO*. But there was no copper sulphate in the bottle—there was *nothing* in it—except perhaps a few drops of the blue solution in the bottom. The glass stopper lay nearby on the shelf.

"That bottle was full and untouched only a few hours ago," announced Jordan in astonishment. "I distinctly remember putting it there myself."

"It's positively uncanny," put in Dr. Spencer, eyeing the empty container.

By this time Jordan was doing some investigating of his own down among the assorted chemicals. It was now his turn to make a startling discovery. He hauled forth from a hidden corner of the cabinet a small jar partly filled with a crystalline sub-

stance, identified by the label as *Cupric Bromide—CuBr₂*. The top of the jar had been cracked off and was lying on the shelf. Crystals of the compound were scattered all about.

"So this was the crash that we just heard," said Jordan.

"It's plain," declared Dr. Spencer, "that very little, if any, of this compound is missing—it's somewhat scattered, to be sure, but most of it seems to be here."

"What's this?" announced Jordan as again he dived in among the chemicals and carefully produced still another bottle. The material concerned now was, as in the other cases, a compound of copper—this time *cupric chloride*. However, the blue solution was untouched—the bottle was full right up to the top. But where was the top? . . . well, there was none, only a jagged neck where the upper portion of the bottle had been knocked off as by the blow of a heavy instrument.

By this time Dr. Spencer had thought himself sufficiently to seize a flashlight from a nearby drawer and go into an earnest exploration of the cupboard. Bottles and jars were hastily moved about, and the penetrating beam directed into all obscure corners. No further damage was evident—neither was the animal, or whatever it might be that was responsible for these puzzling events.

As Dr. Spencer emerged from the cupboard and straightened up, Jordan uttered a low exclamation and seized his arm with scant ceremony.

"Look!" he whispered tensely, and pointed a trembling finger. "The solution! . . . the missing copper solutions!"

In the angle formed by the laboratory wall and the side of the cabinet

there lay a mass of bluish-green material. It looked for all the world like a portion of gelatine dessert that had been dropped on the floor by accident. Just an irregularly shaped, flattened mound of oozy matter, but that queer phosphorescence—that scintillating brilliance with which it reflected the quivering rays from the flashlight—made the identification unmistakable. This was none other than the vanished solution of the complex salt of copper. But how? . . . why? . . .

The two men regarded this visitation in bewildered silence. Suddenly, to their horrified amazement, *the mass of colored gelatine began to move!*

Slowly, deliberately, as though feeling its way with extreme caution, this misplaced portion of “dessert” extended a tentative offshoot from the main body. The projection probed its way out for several inches along the floor, and presently the entire mass just poured itself across the boards to follow the exploratory member. In a moment the blue-green gelatine was again a compact mass in its new position. Once more a knob-like projection developed and swelled out into a pseudopod. Again the colored mass of semi-transparent matter flowed after it. By successive stages of slow painful motion the enigmatic organism worked its way forward from its place of concealment alongside of the cabinet.

During these astonishing maneuvers the two scientists stood rooted to the spot, gaping incredulously at this strictly unscientific phenomenon.

“It’s alive!” gasped Jordan.

“It’s unbelievable!” breathed Dr. Spencer.

The chromatic organism was now well out into the open. It halted its flowing progress and remained an

irregular heap of gelatine on the floor, directly in front of them.

“Something in our last experiment,” whispered the older man, “. . . something that I can’t seem to understand . . . has given *life* . . . to a mere inorganic solution.”

The mass of jelly on the floor quivered. It appeared to glow greener and bluer than ever, as if to register emphatic agreement with the thought which Dr. Spencer had just expressed.

“It moves at will,” added Jordan in awe. “It seems to respond to your words. It must have some form of intelligence. . . .”

As though to dispel from the minds of the two men any lingering doubts on that score, the extraordinary being commenced a slow march across the laboratory floor back in the direction of the open cabinet which had been the scene of the recent disturbance. They followed its movements eagerly. The colored mass made directly for the bottle of copper chloride—the decapitated one. With trembling fingers Jordan had deposited it there, that he might join the doctor in a careful hunt through the cabinet just before the missing solution had revealed itself to them so dramatically.

The gliding, flowing, gelatinous mass reached the bottle, and then an astonishing thing happened. A slender appendage formed itself on the body of the organism—not a thick, bulging, foot-like projection such as it had sent out during its unusual process of locomotion, but a mere whisp of a feeler, like the antenna of some insect. This tentacle climbed swiftly up the side of the container, reached the jagged edge of the broken neck, slithered into the blue liquid with a tiny splash and

buried itself deep into the bottle.

Dr. Spencer's breath came in short gasps. Jordan's eyes nearly popped from his head. For, in a few fleeting seconds, there transpired one of the weirdest demonstrations that ever a pair of such staid and sober scientists had been privileged to witness. Slowly the level of the liquid dropped, as does the soda in a pop-bottle under the lusty draught of an overheated baseball fan. The siphon-like tentacle glowed a healthy, bluish hue as the copper chloride solution flowed through it into the gelatinous being. And, as the fresh "nutriment" diffused into its body, the unearthly organism seemed to throb with new life and energy. It heaved and swelled in healthy abandon—in fact the two spectators could almost swear that the chemical being was undergoing an experience as exhilarating as is alcoholic intoxication in humans.

The last few drops of copper solution, it would seem, were hard to extract. After some futile gropings about the bottom of the bottle the slender siphon tube lifted itself out and rapidly receded into the parent body. Gorged with its feast, the strange entity lay there quiescent for a few moments, while the faint throbbing of its glistening surface indicated that the liquid repast was being assimilated. Presently it began that same flowing, gliding movement along the floor, heading for the corner where it had first been observed. It reached the angle of the floor and wall, and suddenly seemed to pour itself through a slit and into the rear of the cabinet. Just a blue-green flash and it vanished from view.

"Well it's gone," murmured Jordan.

"But not for good," assured the

doctor. "It will be back. It needs food—and seems to know where to get it."

THERE was now no further thought of those endless experiments, those boresome chemical titrations, thermostatic adjustments, electronic bombardments, and the rest of the complex routine that had occupied every waking moment of these two scientists for many a long week. All was forgotten in the mild furor which the sudden advent of this extraordinary chemical being had engendered. They fell to discussing the phenomenon from all angles, and the morning wore on with numerous theories advanced and as eagerly discarded in favor of some newer and apparently more satisfactory one. In the end they came right back to where they had started from, with the bald conclusion that they were completely up a tree as to the true nature of the creature.

"All we know," declared Dr. Spencer, "is that this this organism is here with us, and no doubt expects to stay for an indefinite period."

"And," put in Jordan, "will probably need periodic nourishment."

"You may be sure it will, Burt, if the last demonstration is any criterion. How are we fixed for nutriment for our our let us say, little pet?"

"We have on hand about thirty liters of prepared solutions of assorted copper salts. In addition, there must be in the neighborhood of ten kilograms of solid copper compounds. And then, of course, there is the supply of metallic copper — I don't know offhand just how much of a stock we have, but I think it's considerable. All told we shouldn't

run out of food for our little friend for quite a long while."

"The solid stuff doesn't appear to be of any use to the organism. You could see that, from the way it scattered the crystalline copper bromide about in the cupboard without absorbing any of it. Only the water solutions of copper compounds seem to do the creature any good. Did you notice, Burt, how rapidly it absorbed the liquid from the broken bottle?"

"Just mopped it right up—like a sponge."

"I'd call it some phenomenon akin to osmotic flow of a liquid through a membrane — only with infinitely more speed. Yes, I'm quite sure that it is the process of osmosis—the same process that goes on in all animal and vegetable organisms—with modifications and improvements that were never dreamed of in the ordinary run of living things."

"Now there's the matter of those broken bottles, doctor—the necks snapped off as though they'd been hit with a hammer."

"It shows prodigious strength on the part of the creature—also remarkable intelligence, not to mention extreme impatience. The organism was hungry—it recognized that the contents of the jars or bottles meant nourishment—the stoppers resisted ordinary efforts to remove—and so the thing merely cut the Gordian knot in order to get to the solution in the quickest time possible. I can tell you, Burt, we're dealing here with a high order of intelligence, an extremely interesting manifestation of organic existence. Yet it is an *organism* of strictly *inorganic* beginnings — that is the paradoxical as well as the fascinating angle of it. I mean to study this creature carefully."

AND so the morning wore on, with Dr. Spencer and Jordan working out plans to investigate the bizarre mass of living gelatine which they had so unwittingly sired. All their scheming was predicated on the single assumption that the viscous being of eery phosphorescence would sooner or later emerge from its hiding place somewhere under the floor boards of the cupboard to seek more food. But what if it never showed up again? What if they had glimpsed the strange being for the last as well as the first time? Should they make a systematic hunt? clear out the contents of the closet? even start to rip up the floor in that corner of the room to investigate the whereabouts of the thing?

They were spared any such rash undertakings. A rustling at the far side of the laboratory attracted their attention. It was their gelatinous little friend just emerging from a crevice under the base molding. Obviously it had traversed the length of the room under the floor boards, and had chosen this new point of entrance for reasons best known to itself.

"The little fellow seems to have lost some of its color," announced Jordan. "It's not exactly as bright as it was when we last saw it."

Only a casual observation was required to reveal that the creature was less robust in appearance than it had been several hours earlier. Some of the healthy glow of color was missing, although it still exuded a fair measure of ghostly greenish phosphorescence.

"The meal has been absorbed and assimilated," ventured Dr. Spencer by way of attempted explanation. "Some of the cuprous nutriment has

been used up in the creature's bodily processes — and it craves more of the same sort of provender. In plain language, Burt, I should say that the little chap is hungry again."

The mass of colored jelly had by this time worked its way in its peculiarly laborious fashion to the center of the laboratory. As though to confirm the opinion just expressed by Dr. Spencer the organism sent out that familiar tentacle which it waved in the air significantly.

"Well, well!" exclaimed Jordan. "The little fellow is really begging us for food."

"Even though it is fully capable of getting its own," laughed Dr. Spencer, "as it has already demonstrated to us, yet it prefers to come asking for its dinner."

"That may mean," suggested his assistant, "that it wants to get friendly."

"Very likely. Come, Burt, let's get some victuals ready."

The doctor brought forth a two liter bottle of copper nitrate solution while Jordan hurried to procure a beaker of sufficient size. This meal would be served in style—no haphazard feeding through the jagged neck of a hastily broken container as in the case of the first feeding that they had witnessed.

The blue solution of copper salt was poured into the beaker, which was set down on the floor within easy reach of the jelly-like organism. The two men now stood back to watch a repetition of the former spectacle. Again the wisp of a feeler crawled up over the edge of the vessel and into the depths of the liquid. Once more the level receded with remarkable speed, while at the same time the creature fairly palpitated with physical ecstasy, and its body swelled

to nearly twice its original volume.

When the last of the solution had been drained from the beaker the organism raised its dripping tentacle, waved it to the two scientists as though in token of appreciation, and slowly drew it back into its own substance. Then it slid off to a far corner of the laboratory, and remained there nearly motionless while its new "meal" was undergoing digestion. This gave the two chemists a better opportunity of studying the creature than they had had so far.

There it lay, a heap of gelatinous material sufficient to fill a large platter. Its surface was smooth and transparent, revealing a peculiar granular structure within. Here and there the green-blue interior disclosed darker masses of different sizes, strikingly similar to the stained nuclei of plant cells under the microscope. Judging by the way these bodies heaved and palpitated it appeared that they were connected in some way with the process of digestion and assimilation in which the organism was now engaged. This internal activity was transmitted to the surface in the shape of a slow rhythmic undulation. Like a peacefully recumbent cow chewing her cud, this creature lay there ruminating its recent meal.

"A pretty little thing, eh, Burt?" chuckled Dr. Spencer, "and very friendly, too."

"Playful, I'd call it," ventured Jordan. "Eats right out of your hand—in a manner of speaking."

"If we're going to adopt it, then it's no more than proper for us to give it a name—an appropriate one." The doctor thought a moment, then his features lit up in a sudden smile. "Its origin is *copper*. It thrives on solutions of *copper* compounds

copper *cuprum* *Cu*
 what name would be more suitable
 for our playful little pet than
Cupid?"

And Cupid it remained *Cupid
 of the Laboratory* the enigmatic
 little organism that, through some in-
 explicable quirk of nature, had been
 evolved from a chemical solution
 under the influence of electronic bom-
 bardment.

While the newly christened organ-
 ism remained quiescent, Dr. Spen-
 cer began to draw up some definite
 plans to study the new arrival. He
 would make as careful an examina-
 tion of its internal structure as the
 creature would permit. He would
 even attempt chemical analysis and
 microscopic examination of its sub-
 stance, if he were sure of obtaining
 some of it without causing Cupid
 any pain or discomfort. He would ob-
 serve more thoroughly its strange
 method of locomotion—so reminiscent
 of the way in which an amoeba pro-
 pelled itself. He would investigate
 the osmotic action by which it ab-
 sorbed nourishment. He might even
 try to determine if the creature pos-
 sessed that one attribute which was
 most characteristic of organic things
 — the power of reproduction. And
 there was of course the matter of in-
 telligence—it appeared to have that
 to a respectable degree, for it showed
 signs of having understood the
 movements, possibly even the words
 of the chemist, far-fetched though
 that seemed.

HERE indeed was a field of re-
 search that was almost limit-
 less in extent—and breath-taking in
 all its fantastic implications.

The substantial repast which Cu-
 pid had just absorbed did not seem
 to last it very long. In less than an

hour the organism was astir once
 more, squirming out from its retreat
 into the center of the laboratory. For
 a few moments it remained there,
 seemingly surveying the two scien-
 tists at their work of checking up
 on their supplies of copper com-
 pounds. Dr. Spencer was the first
 to become aware of Cupid's inter-
 est in their activities.

"Feeding time is here again," he
 announced to Jordan. "Just look at
 it . . . fairly watering at the mouth
 in the presence of all this copper
 nourishment."

Jordan set out another substantial
 portion of bluish liquid—it happened
 to be the remainder of the copper ni-
 trate solution which had gone to fur-
 nish the previous repast for Cupid,
 with the addition of a fresh quantity
 of chloride. The creature cared not
 a bit whether it was chloride or ni-
 trate—just so long as it was copper.
 In a few seconds the beaker was
 drained. But Cupid did not, as it
 had done before, glide off to a cor-
 ner to digest the solution. Instead it
 remained beside the empty contain-
 er, with its bluish tentacle swaying
 about in the air.

Dr. Spencer eyed the gelatinous
 being reflectively. "It doesn't appear
 to be satisfied. Perhaps that quan-
 tity wasn't enough of a meal. Let's
 give it the rest of the chloride from
 that bottle."

They poured Cupid another stiff
 libation—almost as large as the first
 — and were astonished to see
 that portion vanish with equal speed.
 Following this mighty repast, Cupid
 did not even bother to retire to the
 side of the room to digest its meal.
 Instead it remained squarely in the
 center of the floor, its swollen mass
 quivering and glistening in the sun-
 light that came streaming through

the window. With the utmost complacency, and in full view of the two scientists, the creature went ahead on the job of incorporating the new copper solution into its own peculiar body substance.

It was amazing to see such vast quantities of liquid condensed so readily into compact jelly-like material in Cupid's palpitating structure. Dr. Spencer observed meditatively that the creature must, in some way, extract the dissolved copper salt and almost immediately eliminate the bulk of the water, undoubtedly in the form of vapor, through its surface membrane. Although Cupid had grown considerably since they first set eyes on it, the total mass of the creature was obviously far short of the combined volume of solution which it had absorbed during its several feedings.

And now the two chemists fell in earnest to the task of preparing copper salt solutions for their newly acquired pet, lest it succumb for lack of proper nourishment—or it be tempted in sheer desperation, to go on the same kind of rampage among the assorted chemicals in which it had indulged during the night. All available copper compounds, both liquid and solid, were hauled out from every cupboard and storage place in the laboratory. Masses of blue crystals went into crocks of water to be stirred vigorously into solution. Quantities of the less soluble copper salts were heated with water in the largest containers available, in order to hasten the process of dissolving them. Several filtration funnels were set up to remove excess solids that refused to go into solution. A half dozen operations were going on at the same time while the chemists hastened about feverishly from one to the other.

AT frequent intervals either Dr. Spencer or Jordan left his immediate task to set out a huge container of solution for Cupid whenever the organism evinced a craving for more nourishment. In between feedings the bloated creature would squat in the center of things, viewing with evident satisfaction the extensive preparations being made for its immediate comfort and happiness. Or else it would meander around the laboratory in its characteristically clumsy fashion, nosing about curiously as though it were possessed of a keen desire to learn the secrets of the place.

It was during these wanderings that Dr. Spencer observed something about Cupid that had him puzzled no little. He called his helper's attention to his discovery, and together they dropped their immediate tasks and observed the behavior of the creature.

"Look—there it goes again," pointed out the doctor, "just as it did before. Now watch carefully"

Cupid was slowly squirming its way along the side of the room. It reached an empty wooden box that happened to be there, explored it tentatively with its pseudopod and slid around the obstruction. It continued its journey close to the wall. Directly in its path was a steam radiator located under one of the windows. Dr. Spencer seized Jordan's arm and whispered tensely.

"There, Burt . . . observe what Cupid does now!"

When the organism reached a point about two feet from the radiator it suddenly came to a halt. An exploratory arm swung out slowly toward the metallic obstacle. The appendage weaved about suspiciously within six inches of it, as though trying to

ascertain its true nature. Suddenly Cupid swept the arm back into its body and draw away as though the radiator were some noxious substance that would be fatal to the touch. The organism now made a wide detour around the offending object, and continued its journey about the laboratory.

"There!" breathed Dr. Spencer. "That's just what it did in the neighborhood of that small anvil over in the corner. It came up, sniffed around a bit, then decided to give the thing a wide berth."

"Now what do you suppose is the reason for that sort of behavior?" queried Jordan.

"A magnetic repulsion, or some similar effect, I guess."

"Very likely a kind of There it goes again, Burt Watch it!"

This time Cupid had navigated itself back to the laboratory table and was edging its way alongside of it. A small metal trash-can stood directly in its path. Again a feeler went forth from the creature's body to probe the new obstruction. Then it promptly changed its course as before, never coming closer than a foot or two of the iron can.

"That's a thing that will have to be investigated along with everything else about the organism," said the doctor.

Throughout all the subsequent movements of Cupid around the premises the two men noted that it never deviated from this queer practice. Once it was an iron mortar—somewhat of a laboratory antique which Dr. Spencer had not used for years, and which stood dusty and neglected in a far corner. At another time it happened to be the small steel safe in which were stored quanti-

ties of radium, platinum and gold. Or else it was the cast iron legs that supported the sink, or the metal oil stove that the doctor used frequently on early spring or late autumn mornings to get the chill out of the laboratory. All of these objects Cupid shunned with methodical care as though to pass too closely to them meant real physical harm for the creature. Even a stray ringstand or tripod, off to the side somewhere, was anathema to it. This queer little aberration was certainly one of the most uncanny in Cupid's complex behavior pattern—one that would bear thorough study.

But for the immediate present all idea of detailed investigation or experimentation with the organism had to be postponed. All thought of anything but preparing copper solutions for Cupid had to be dismissed from their minds.

The immediate problem was to lay in a sufficient supply of food for it to live on and develop. The rest would take care of itself.

By nightfall both chemists were thoroughly exhausted. They had been at their task constantly for most of the day, snatching only a few minutes for a bite to eat, then back on the job once again. But there were results to be sure. Row on row of large and small jars of copper solutions lined the laboratory tables. Flasks of blue and green liquids stood on shelves and in cupboards from which all manner of chemical and electrical apparatus had been hastily removed to make room for the precious cargo. Crocks and jugs of every shape and description stood about in odd corners, filled to the brim with liquid nourishment for Cupid. And, as for that regal individual, it had dined sumptuously all

day at more and more frequent intervals. By this time it had grown until it was a heap of colored jelly big enough to fill a good-sized bucket—and getting larger with each ration of copper solution which it imbibed.

Dr. Spencer wiped his brow and surveyed the vast collection of assorted containers. Then he glanced at Cupid, squatting serenely in its accustomed spot on the floor alongside of a large earthenware bowl. The organism was just draining from it the last few drops of blue solution. Was this the twentieth copper repast? Perhaps it was the fiftieth the exhausted scientist had long ago lost count. What a hectic day it had been! But there was something to show for it. From an insignificant little blob of blue-green jelly Cupid had been built up to a truly imposing creature. And there was that vast quantity of nourishing solution all prepared for its future meals.

"Do you think it will be necessary for us to keep feeding Cupid all night?" asked Jordan wearily.

"We can set out a good quantity of solution," returned Dr. Spencer, "and let it help itself whenever it gets the urge. That will give us a chance to get some rest."

Jordan readily fell in with the idea. Even in the interest of so phenomenal a research as that on the enigmatic copper being he scarcely relished the idea of staying up all night—or even any part of it.

And so they set out in the center of the laboratory three of the largest vessels they had available—two huge earthen bowls and a glass tank which had once been used as an aquarium. Assorted solutions of copper compounds were poured into each,

the chemists being watchful of only one thing—namely that no two compounds should be mixed which would result in the precipitation of some insoluble substance. Cupid's absorptive mechanism could handle nothing unless it came in liquid form. Once the solutions were taken into its body it did not seem to matter much. All sorts of chemical reactions and interchanges might take place there—probably did, what with the inordinate variety of its copper diet—yet it did not appear to mind these interactions. In fact it was very obvious that the creature thrived on such conglomerations.

A LONG toward midnight Jordan, thoroughly fatigued from a lengthy day of unusual activities, dropped off to sleep on one of the cots without even the formality of removing his clothes. Shortly thereafter Dr. Spencer decided to call it a day also. Solicitous for Cupid's well-being, he left the lights on in the laboratory, even though the copper creature had already demonstrated its ability to negotiate unfamiliar territory in the dark. The last view through the open doorway between the two rooms was of Cupid squatting complacently on the floor among the vats, guzzling the solution among one of them with huge relish. Then the scientist was off to join his assistant in well-deserved slumber.

"Great heavens!" gasped Jordan.

Dr. Spencer was speechless. Together they stood in the doorway, rubbing the sleep out of their eyes and surveying the scene in the laboratory.

Cupid, swollen to three times its bulk of last evening, squatted in the center of the room. Surrounding it were evidences that it had spent the

night dining often and well. The three huge containers were drained dry of their copper solutions. Scattered about on the floor were countless bottles, jugs, flasks—some standing upright, most of them lying on their sides. They were all empty—the last drops of blue liquid siphoned out of them by Cupid's avid tentacle. The copper-thirsty creature had certainly been on a rampage. In some way it had managed to drag the containers from their shelves and cupboards. Most of them the organism had succeeded in opening by simply removing the stopper. Seemingly it had lost patience with a few recalcitrant corks and had snapped off the necks with just as much dispatch as in the case of that other bottle of yesterday. One or two jars had been completely smashed—probably by accident. There were only faint traces, however, of any spilt liquid on the floor. Evidently Cupid had mopped up the precious chemicals before the flood could travel far. Off to a side was the wreckage of a large jar of solid copper nitrate. The crystals lay in a heap, mingling with the fragments of the smashed container, and scattered fan-shape over a radius of several feet. And it was clearly evident that Cupid had studiously ignored the solid chemical. The creature was on a strictly liquid diet.

"That's what I call running amuck—with a vengeance," asserted Jordan.

"I can't see how all this happened without our hearing it," mused Dr. Spencer, surveying the wreckage with dismay. "Must have been enough rumpus here to wake the dead."

Cupid, a quivering mound of blue-green gelatine, sat peacefully amidst the devastation, as if enjoying the

bewilderment of these mere mortals. Then it began to move.

"It's a whole lot more spry than it was yesterday," noted Jordan.

"Yes, it seems to be getting around much faster," Dr. Spencer agreed, "and in spite of its bigger bulk."

Cupid fairly glided across the floor. Its pseudopods no longer emerged wavering, hesitant, as though uncertain of their way, if not of their own function. The appendages shot forward with bold assurance, and the mass of the creature followed swiftly. Threading its way carefully among the empty jars and the assortment of shattered containers, it glided to the table cabinet—the same one in which it had made its initial appearance yesterday (was it only yesterday? . . . it seemed to the befuddled scientists as though Cupid had always been a denizen of this laboratory). A deft, club-like appendage reached up and wrapped itself around a five-gallon bottle of greenish solution. Adroitly, the organism eased the heavy container to the floor as readily as though it were a two-ounce vial.

"Cupid's going to demonstrate its method," whispered Jordan.

Without wasting time in formalities the enigmatic creature steadied the bottle with two tentacles that, although jelly-like in appearance, seemed to have the grip of a steel vise. A third appendage whizzed through the air and wrapped itself about the neck of the jar. The grip tightened—the coiled member glowed with a new wave of vital energy passing into it from the body of the organism. There was a sharp snap, a tinkle of glass, and the broken neck dropped to the floor. In a moment Cupid was ingesting another massive cargo of copper solution.

"So that's how it does the trick?" remarked Jordan.

"Prodigious strength — remarkable technique—and to think, only soft tissue; like so much putty" mused Dr. Spencer. "What a creature—what an organism!"

They set about to clean up the wreckage and bring some degree of order to a laboratory that had always been a model of orderliness in days before the intrusion of this extraordinary being. Dr. Spencer took stock of the copper sulphate now on hand and was astonished to discover that Cupid had done away with nearly half of their supply during its night of unbridled carousing. If it kept up its phenomenal pace of absorbing copper-compounds the quantity now on hand would not last through the morning.

"What are we going to do?" queried Jordan in dismay.

"Continue right along preparing more solutions for Cupid," was the prompt reply. "We'll have to keep up with its enormous appetite before we can attempt to study the creature."

"Maybe it will taper off before long—I mean the appetite," ventured the assistant.

"Perhaps," consoled the chemist. "But if it doesn't . . . well . . . we'll have to dig up some scheme to tackle the problem."

And problem it was getting to be . . . a serious problem. By mid-morning the last of the old supply of solutions had disappeared into Cupid via the familiar siphon-like appendage—and it was beginning to make inroads on the new liquids which the two researchers had hastily prepared. Shortly before noon they dissolved their last crystal of copper salt to make up liquid nour-

ishment for Cupid. Within a couple of hours that too had gone the way of all the other solution—and the insatiable organism, now grown to alarming proportions, was clamoring for more — clamoring mutely, but with firmness and finality none the less.

With the disappearance of the last drop of copper solution, the entire situation seemed to take on a different aspect. All through the dramatic developments of the last few days the two scientists had been regarding the matter as more in the nature of a lark or adventure. It had been thrilling to see Cupid grow with such remarkable speed under the influence of its extraordinary diet. Dr. Spencer had been looking forward eagerly to the task of making a detailed study of the creature—once the problem of providing it with an adequate food supply was solved. He had been anticipating with great keenness the bombshell which he expected to explode in the scientific world when he made public the first announcement of his copper creation. And Jordan had been looking forward no less eagerly to helping along in the task of study and investigation.

But now the realization suddenly began to dawn on them (almost simultaneously on both of them) that they were slaves—mere slaves of an inorganic monstrosity with an appetite that could not be satisfied. The notion was not at all a pleasant one to contemplate.

SLUMPED in a chair into which he had wearily dropped after hours of exhausting work, the doctor mopped his brow and gazed heavy-eyed at the swollen mass of jelly.

"This is getting to be too much

for me," he gasped. "Where's it going to end, anyway?"

"I'll be hanged if I know," was Jordan's comment. He leaned heavily against the laboratory table and passed the back of his hand across his forehead as though to brush away the daze that enshrouded him.

"Cupid's got us hopping." Dr. Spencer's lapse into vernacular revealed the perturbed state of his mind more than anything else could. "The creature insists on having its copper nourishment — and we're here to supply it."

"The confounded thing seems to take it all for granted," was Jordan's dry comment.

"That appears to be the unfortunate truth, Burt. Evidently Cupid has made up its mind—or whatever it has that passes for a mind, that we are going to provide it with an inexhaustible supply of copper solutions."

"Well, we've reached the end of the supply—and I wonder what Cupid expects us to do?"

"Perhaps it wouldn't be a bad idea if one of us—maybe both of us—went out to procure a fresh quantity of material. After all, Burt, this is a situation which has to be seen clear to the end—no matter where it leads us. I'm in favor . . ."

Cupid interrupted the discussion at this point by making plain its own notions on the subject. Swiftly, smoothly it moved across the room to a far corner, and returned forthwith dragging a large roll of sheet copper behind it. This the creature dumped peremptorily at the feet of the astonished scientists and took up its position in an expectant heap close by. There was no mistaking the meaning behind this new move.

"Darned if the critter doesn't want

us to prepare fresh solutions from *this!*" exclaimed Jordan.

"Quite right," returned the doctor. "It knows that its food supply is not exhausted—yet."

Wearily the scientists set about to dissolve the sheet metal. Beakers of nitric acid boiled vigorously in the ventilated hoods atop the table on the other side of the laboratory. Clouds of brownish fumes billowed forth—too rapidly to be carried away up the flues, so that the room was soon reeking with the acrid vapors of nitrogen oxides.

By dint of hard and painstaking effort the workers succeeded in reducing the metal to a form that might be acceptable to Cupid—nearly ten liters of copper nitrate in concentrated aqueous solution. With trepidation they set it out for the organism—and with dismay they saw well over half of it disappear in the space of two minutes.

"No use our going on this way," said Jordan. "We'll never be able to keep up with the creature."

"It doesn't seem likely that we can," agreed Dr. Spencer. "Even if we convert every last particle of copper that we possess into food for Cupid it will never be enough to satisfy the organism."

The more they discussed the matter, the more they came to realize that the problem was getting out of bounds—that it threatened to develop into a situation far beyond anything with which their puny efforts could grapple. Here was a mass of strangely colored jelly—inorganic or organic, it was hard to tell which—gorging itself on a strange diet, growing at an astonishing speed, practically enslaving them in its omnivorous demands for nourishment. What if it kept on increasing in size at the same

phenomenal rate? What if it left the haven of this laboratory and ventured forth to find larger and more fertile fields for exploitation? What if it suddenly were to demonstrate that most characteristic of all properties of living things, the ability to reproduce its kind—and so let loose upon the world a scourge of rapacious entities, endowed with uncanny intelligence and a vast thirst for copper in solution? Could all these be the fantastic consequences resulting from that innocent little experiment of bombarding a tiny bit of liquid with electronic particles? From all indications it would seem to the two bewildered scientists that events were heading very rapidly in that direction.

"We'll have to cut this business short before it gets completely out of hand," said Dr. Spencer grimly. In the light of recent developments, all thought of studying the creature scientifically were now relegated to the background. The growing menace must be dealt with summarily.

"But how?" queried Jordan anxiously.

They could attempt to corner the copper being—capture and confine it where it could no longer be a menace. If they themselves were unequal to the task they could go off and summon help to effect the capture. They could withhold the creature's rations and thus starve it into submission. If matters became really acute—that is, if Cupid became a real threat to their safety, or the safety of others—then they could destroy it—as easily as they created it. Some poisonous compound mixed in with its feeding a blow from a stout club a knife thrust a bullet if needs be, a whole volley of bullets

FOLLOWING the last meal of freshly prepared copper nitrate there seemed to be at least a temporary let-up in Cupid's inordinate demands for nourishment. Over an hour went by during which the entity remained motionless in a corner of the laboratory. In the centre of the room stood the remains of the latest repast—nearly half the copper solution which they had prepared from the metal. Cupid made no move to finish the ration.

During the interval the two men had a welcome opportunity to catch their breath. In hushed whispers, almost for fear of letting the creature overhear them, they discussed plans and formulated theories, meantime keeping a watchful eye on Cupid. Perhaps the worst was now over. Perhaps the creature's ravenous craving for copper compounds had at last been permanently appeased. Perhaps. . . .

But no! Fresh developments came suddenly and with startling effect.

Dr. Spencer was the first to observe the peculiar formation that made its appearance on Cupid's body. It began as a rounded, inconspicuous bulge on the side of the organism. The scientist called his assistant's attention to the growth. Slowly the swelling increased in size and became a distinct knob. Somehow it had the appearance of being more than a mere pseudopod. They had seen the organism evolve many dozens of these flowing, creeping appendages during its wanderings about the premises, and were somewhat acquainted with them as indispensable aids to locomotion. This growth was something brand new—a solid mass of jelly-substance that struck straight out from Cupid's body

like a sore thumb. As it grew longer the new addition swelled out at the end and middle, while the part attached to the creature became constricted. Fascinated, the two men watched the appendage as it grew larger and larger, like a toy balloon that was being inflated. Presently its own weight caused it to sag, and it hung limply against Cupid's side, a mass of bluish-green gelatine over a foot in length—and growing larger with each passing moment.

Dr. Spencer suddenly recognized the phenomenon—and his heart sank as he did so. He had seen similar manifestations under the microscope too often to be mistaken.

"It's just as I feared," he announced. "*Reproduction . . .* and by the process of *budding* like that of yeast cells."

"Now we may expect more trouble," Jordan groaned, "if Cupid Junior is going to demand as much nourishment as its parent."

In a few minutes the swollen appendage detached itself from the larger mass and lay near it on the floor, a quivering blob of gelatinous substance, in much the same manner as Cupid did when it first made its appearance—only much bigger. Presently the parent set its large bulk in motion and proceeded swiftly to the container of copper nitrate which it had but recently abandoned. Trailing behind it awkwardly came Junior, manfully working its pseudopods in an endeavor to keep up with its more experienced parent. Together the two organisms attacked the remainder of the solution. The young one apparently needed very little instruction in the manner of imbibing the liquid nourishment. Judging by the lively glow of its siphon tube, sucking up the chemical

liquid, as well as by the healthy expansion of its little body, it would appear that the offspring accounted for as much of the food as did its parent—perhaps more.

"This is only the beginning," said Dr. Spencer grimly as they both regarded the two organisms resting there and complacently digesting their repast. "Now that the creature has demonstrated its ability to reproduce its kind, there is no telling where this curse is going to stop. All they need—these Cupids and succeeding generations of Cupids—is copper solutions, and they will continue to thrive and multiply. So far the parent has had no trouble in obtaining nourishment—thanks to us. But even without human assistance I am certain that these organisms possess enough intelligence to obtain their own food unassisted—even from the raw materials."

"What are we going to do now?" queried his assistant wearily. The extraordinary succession of events had rendered him bewildered and almost helpless.

Dr. Spencer cast a glance of apprehension in the direction of Cupid and its young one. He lowered his voice to a whisper.

"We're going to nip this thing before it gets to be a real menace. My idea is to destroy the parent before it has a chance to reproduce further. Then we can get hold of the offspring and coop it up in a trap of some sort—after which we can study and investigate it to our heart's content."

It sounded like an eminently feasible plan. Once the parent creature and its insatiable appetite was safely out of the way, then the young one could be developed slowly and with measured regularity. Safely incar-

cerated where it could not go on a copper rampage such as its omnivorous parent had indulged in, the creature could be investigated coolly, methodically and with the measured calm that befitted an important scientific research.

THE discussion was carried on in hushed tones, with occasional glances at the objects of all this sinister planning. Were they aware of the dire plot being cooked up for their downfall? Did they possess enough intelligence to comprehend the whispered scheming of these two mortals? The men lowered their voices to an almost imperceptible buzzing. Cupid and its offspring lay apparently somnolent near the recently emptied container of copper solution.

Jordan rummaged about and soon produced a sturdy wooden crate, in which a carboy of acid had recently been shipped to the laboratory. With the addition of a top it would make an ideal prison for the junior Cupid. He turned to get the necessary tools, and as he did so a sudden warning shout from Dr. Spencer made him wheel swiftly. But he was not quick enough to ward off the attack. A hazy smear of color marked Cupid's lightning sally across the laboratory floor. A whip-like tentacle flashed through the air and wrapped itself with a grip of iron around Jordan's ankles. A cry of astonishment and pain burst from his lips. The wooden carton went flying through the air and crashed to the floor in kindling wood. As neatly as though he had been tackled on the football gridiron Jordan was swept from his feet and sent sprawling.

The onslaught of the enraged organism came with such startling suddenness that Dr. Spencer had time to

do no more than utter his hoarse shout of warning. Even after his assistant had been stretched out by the flying tackle, the scientist stood transfixed, unable to move a muscle, paralyzed by the spectacle.

With Jordan down, Cupid eased the grip on his ankles. Shouting, kicking viciously, beating his arms wildly in all directions, the man made an effort to get up. But Cupid had other ideas. It swept its huge bulk over the struggling assistant, fairly smothering him with its slimy gelatinous folds. Jordan swung his fists desperately, burying them in the oozy softness of the creature's body. He writhed and twisted under the choking, crushing mass but could not dislodge it.

In a moment or two Dr. Spencer emerged from his spell of suspended animation and sprang to Jordan's aid. The nearest weapon he could lay his hands on was a stave from the demolished crate. With this he belabored the quivering creature with vigor, meantime shouting encouragement to his sorely pressed assistant. The furious beating seemed to have no effect on Cupid. The organism retained its smothering grip on Jordan who was now beginning to struggle less violently than at the start.

With a cry of alarm Dr. Spencer dropped his cudgel and leaped for a more potent weapon. In an instant he was back, automatic in hand, hovering over the tangled mass of man and copper organism. He dared not shoot—and in anguish he saw Jordan's arms and legs cease struggling, his body drop limp and nerveless.

Cupid now disengaged its massive bulk from the prostrate figure and slid swiftly away in the direction of its young one, which had remained

squatting in its original position, viewing the fray. Together they made off as nonchalantly as though nothing out of the ordinary had just transpired.

With an exclamation on his lips Dr. Spencer took a step forward, aimed deliberately, and let fly all he had point-blank at the retreating creatures. They continued their way as unconcernedly as though he had been pelting them with peas instead of bullets. In an instant Cupid and offspring had disappeared into the dark depths of the half-open closet.

For a fleeting moment the scientist stood there aghast, smoking weapon in hand, head resounding with the echoing crash of pistol fire in the small room, his eyes glued to the spot where the organisms had disappeared. Then with a gasp he turned and dropped to the side of his prostrate assistant.

A faint pulse and an almost imperceptible flicker of an eyelid heartened the doctor. With considerable effort he lifted Jordan's limp form and half carried, half dragged it to one of the cots in the adjoining room. He bent over his assistant anxiously, apprehensively. Jordan's skin presented an extraordinary appearance. His hands and arms bared to the elbow showed a faint phosphorescent blueness from contact with Cupid. Where the creature's body had touched Jordan's skin about the chest and neck the same queer hue was evident. Likewise one leg from knee to ankle, exposed in the terrific struggle, had some of these colored markings. The gelatinous organism had certainly left its imprint.

Dr. Spencer guessed, from unmistakable indications, that Jordan was suffering from a peculiarly severe case of copper poisoning, complicated

by some strange form of nervous debility associated with the bluish phosphorescence of the skin. With the application of restoratives, followed by the administering of proper antidotes for the poisoning, the stricken one presently showed signs of returning to consciousness.

"What—what happened, doctor?" he murmured feebly. He attempted to sit up, but the effort was too much for him, and he sank back weakly. The chemist patted his arm to reassure him.

"Just take it easy, Burt," he cautioned soothingly, "and you'll be over it in a little while." He recounted the details of the brief but exciting episode to his bewildered assistant.

"And where are the . . . the infernal creatures now?" queried Jordan.

"The last I saw of them," replied Dr. Spencer, "they were disappearing into the closet—in a hail of bullets, too. And that brings up something I've got to look into right now."

HE left Jordan and cautiously entered the laboratory. All was serene. Cupid and Junior were nowhere in sight. Near the work table lay the shattered crate, and round about the vicinity were evidences of the fearful struggle that had taken place there only a few minutes ago.

The doctor crossed over to the other side of the room. Three small round holes, one in the floor and two low in the wall, gave evidence of where his bullets had struck. He stooped and made a careful inspection. Suddenly he uttered a low exclamation and reached for a tiny object lying there. It was one of the lead pellets from his gun, considerably flattened from impact with the

small anvil that lay in the corner. A close search revealed another bullet close by—similarly flattened.

The chemist scrutinized the two chunks of metal carefully. The astonishing thing about them was their color—a dull red. Tentatively he rubbed one of the bullets with his finger. Some of the color came off. Immediately the true meaning of this phenomenon flashed into his mind. These two missiles had passed through Cupid—perhaps through both parent and offspring. For the coloration on the pieces of lead was *metallic copper*.

At the moment Dr. Spencer lost sight of the chemical reaction involved. It was a relatively simple one, he would have admitted, had he given it only a passing thought. But the true import of his discovery escaped him in the larger, more poignant realization that the jelly-like organisms were really invulnerable. Since he had been firing at such extremely short range, he was positive that he had hit each of the creatures at least once. Undoubtedly the holes in the wall and floor had been made by several bullets that had first passed through the copper beings, as had the two flattened bits of metal he now held in his hand.

Invulnerable! . . . for Cupid and its young one had paid but scant attention to the rain of lead. Unperturbed, they had continued their flight and had disappeared into their present hiding place.

Dr. Spencer did not stop to investigate further, but hastened back to where Jordan lay. The assistant was entirely conscious, although pitifully weak. The lethal powers demonstrated by Cupid during those swift moments of contact with the unfortunate victim were positively aston-

ishing. Jordan could truly thank his lucky stars that he had not succumbed completely to the murderous assault.

The doctor hurriedly apprised him of his latest findings. The copper beings seemingly were immune to injury. If they could successfully weather such a storm of lead, then how were these men going to combat the menace? For menace they were—these vicious inorganic creatures with charmed lives. Nothing would stop them now. From an insignificant beginning here in this obscure laboratory the curse could spread far and wide with grim relentlessness. Just as Cupid and its offspring had practically enslaved these two scientists, so could the new generations of copper creatures, as yet unborn, sally forth and compel other humans to furnish liquid nourishment for their growth and reproduction.

A more sinister angle of the picture presented itself as they discussed the menace. Cupid had truthfully *compelled* Dr. Spencer and Jordan to prepare copper solutions for itself, and later for its growing young one. But the men reluctantly admitted to themselves that human agency was probably not essential to the continued development of the organisms. The creatures had already demonstrated enough native intelligence, as well as mechanical capability, to obtain the required materials and go about preparing their own liquid nourishment. Why they had forced the two men to minister to their needs was not clear. Perhaps it was simply the cupreous counterpart of the universal human desire to be "waited on." Or maybe the organisms were taking this means of impressing the men with their own vast superiority over mere mortals.

In the light of recent developments it was not at all unlikely that, once the flood of copper beings swept out over the land, they would find man's enforced aid too slow, too uncertain, or possibly too dangerous for their uninterrupted development. They might decide to dispense entirely with human assistance—perhaps with the human race itself—and proceed to secure their sustenance from the very raw materials of the planet.

The picture of a world entirely overrun by greenish-blue masses of oozing gelatine was not a pleasant one to contemplate as Dr. Spencer and Jordan discussed the situation in tense whispers. Something drastic had to be done but what?

The idea of administering a poison to the creatures presented itself. It had come up once before in their discussions, at a time when the menace of the copper organisms had not appeared so overwhelming.

"Couldn't you add something deadly to their copper solution?" suggested Jordan.

"Yes, I suppose I could," mused Dr. Spencer. "Cyanide . . . morphine . . . any of a half dozen poisonous compounds. But how do we know that they will accept the mixture so readily. They're crafty beings. They may have—they probably *do* have the ability to steer clear of dangerous combinations. You remember, don't you, how scrupulously careful Cupid was when it first went rummaging through the cabinet—how it chose nothing but copper salts? It could have sampled substances that *resembled* what it wanted, but it didn't—substances like aniline blue, ultramarine, ferrocyanide compounds. All of these it passed up in favor of cop-

per solutions. So you see that it seems to have a *nose* for the safe and the unsafe as far as its diet is concerned. My opinion is that these creatures are too clever to be caught napping in this way."

"If everything else fails," ventured Jordan weakly, "we can escape from here—before it's too late." Flat on his back, scarcely able to move a muscle, he struck a rather incongruous note when he mentioned escape.

UNQUESTIONABLY their lives were in danger if they permitted Cupid and Junior to roam at large. And of course, there was the greater danger to all mankind if the organisms extended their field of operations beyond the narrow confines of this laboratory.

Perhaps escape was, after all, the solution to the problem. Obviously the job of handling these two enigmatic creatures was one that had proved too much for the puny powers of two mortal men. If the news could be spread about swiftly, and others enlisted in the battle, the menace could be stamped out before it developed into a real scourge. All thoughts of studying the copper organisms were now relegated to the background. The urgent problem now was to destroy first—and study afterward.

Dr. Spencer inwardly cursed the blindness and stupidity that had made him insulate his laboratory from the outside world with such great thoroughness. He had wanted quiet, isolation from influences that might distract him from his researches. And he had managed to obtain exactly what he had craved—he and Jordan—namely, an almost complete hermit existence. Their little building was well outside the town

limits, and stood a distance back from the road, itself one of the least traveled in the vicinity. Their nearest neighbor was over half a mile away—the distance might as well have been half a hundred miles for all they ever saw of him—or for that matter, he of them. The doctor had even scorned a telephone in his laboratory as being something that would militate against their complete isolation. And how they missed that instrument now! A few crisp words and they could have all the assistance necessary to combat the copper menace. But idle conjecture. . . .

"Well, Burt," said Dr. Spencer, "it looks as though there's only one way out—and that is, to evacuate the premises as soon as possible. Do you feel strong enough to try?"

Jordan smiled up bravely at the chemist. He struggled to a position on one elbow and remained there swaying precariously. Yet he nodded assurance to Dr. Spencer.

"Here, let me help you, Burt." The scientist drew the other's arm across his own shoulder and supported his shaking frame as he rose to a sitting position. Presently Jordan stood up on his own feet, with much of his weight being taken care of by the doctor. A bit shaky, but with lips tightened in a grim half-smile the assistant signaled to go ahead. The two shuffled along, emerged into the laboratory—and stopped.

Cupid and Junior had left their place of retreat and were now stationed side by side in the center of the room. They were engaged in the cupreous equivalent of *leering*—the two men could almost *feel* the scorn exuding from the bodies of the organisms. And it was with a sinking sensation that Dr. Spencer observed how miraculously the creatures had

weathered the recent barrage of lead—not a mark to indicate where his bullets had passed through their gelatinous structure.

"They may have guessed what our scheme is," whispered the doctor, "and probably they don't like it a bit. Come, Burt. . . ."

The two men made for the opposite side of the room, heading for the door and the sole exit to the outdoors. But Cupid was ahead of them. Again there was that familiar bluish smear as the organism fairly leaped across the floor to head off their flight. In a flash the creature lay quivering almost on the threshold, effectively blocking any further progress in that direction. Junior remained where it was, observing the proceedings with great complacency, as though fully confident that its energetic parent would handle the situation with the proper neatness and dispatch.

The two men remained standing uncertainly—but only for a moment. Then Dr. Spencer shot a glance at one of the windows—almost as handy an avenue of escape as the door. Jordan surmised his intention instantly. They exchanged a swift, meaningful look, and the assistant nodded vigorously. Together they wheeled and headed for the window—Jordan tripping and shuffling as a fresh wave of weakness swept over him—the doctor supporting him as best he could.

But again the copper organism was too spry for mere men such as these. It anticipated their new move with uncanny swiftness, and almost threw itself across the room ahead of them. Again Cupid squatted directly in the path of escape, its tentacles weaving about threateningly, its palpitating body giving forth a sinister glow.

"Trapped!" muttered Jordan. The realization of how thoroughly they were at the mercy of the cupreous creatures dawned upon both of them at almost the same instant. Dr. Spencer's eye swept around the laboratory. There were three other windows that offered a ready means of escape—but Cupid had already demonstrated its phenomenal alacrity.

Jordan swayed unsteadily and took a firmer hold on the doctor's arm. "We can separate," he suggested huskily. "One of us will aim for the door and the other for a window. Cupid can't be in two places at once. It's our only chance. . . ."

"Unless Junior pitches in to help its parent," rejoined Dr. Spencer grimly. He shot a glance at the diminutive youngster sitting off to the side in the attitude of a minor menace. One could never tell. Puny though it appeared, it might constitute as much of an obstacle to their escape as its belligerent progenitor.

"Do you feel strong enough, Burt?" asked the doctor apprehensively.

"I could make a try at it," whispered Jordan.

"Then you take the door," said Dr. Spencer, "and I'll Burt! Burt!"

Jordan's knees suddenly buckled. The doctor flung his other arm about the tottering assistant, but the collapse came too abruptly for him to render much good. The stricken man simply sagged into a heap, nearly pulling the astonished doctor with him to the floor. The poison of the copper organism had certainly done its work effectively.

Dr. Spencer bent over Jordan. Much to his relief the assistant opened his eyes and attempted a feeble smile. His lips moved, but no

sounds emerged. He tried to motion with his hands, only to have them drop limply to his side.

Once again Dr. Spencer bent under a dead weight load as he dragged Jordan back to the cot which he had so recently vacated. The assistant was conscious, but physically helpless. After being made as comfortable as possible he merely lay there, looking up gratefully into the face of the doctor, with his bloodless lips bravely attempting a smile of thanks and encouragement.

THE situation was now indeed a desperate one. Dr. Spencer pondered the matter deeply. What would be the best way to proceed? Should he make a lone dash for liberty? Assuming the highly doubtful premise that he could get by the watchful organisms at either door or window, then what? While he was out getting help, Cupid and Junior might execute their vengeance on his helpless assistant. Yet for that matter, what would prevent the creatures from killing them both this very moment, if they so desired? Cupid had already shown its remarkable lethal powers, as well as an almost supernatural invulnerability to ordinary human weapons.

His meditations were abruptly terminated by a rasping sound at the doorway into the laboratory. He looked up to see Cupid dragging a large bar of copper. Junior was tagging along at the other end of the bar, lending whatever assistance it could to the job of moving the heavy weight. The creatures stopped at the threshold with their metallic burden. It was not difficult to surmise their meaning. Their very attitude suggested what they wanted of the scientist.

Dr. Spencer eyed the two organ-

isms framed in the doorway of the laboratory—and hesitated. Must he comply with their demands? There certainly was nothing left for him to do. Resistance was futile. He might humor them along, prepare new copper solutions for them, meantime stalling for time in order to devise some way to outwit them ultimately. He glanced down at the prostrate form of his assistant. Thank Heavens he was alive—in fact the overpowering weakness that had so recently engulfed him was slowly showing signs of dissipating. It was only a matter of time, the doctor hoped, before Jordan would be on his feet, so that they might again match wits with the copper organisms.

The chemist proceeded into the laboratory, picked up the heavy bar of metal where the creatures had deposited it, and set about at the now familiar task of converting it, by the action of acid, to the condition demanded by Cupid and its progeny. With evident satisfaction the two gelatinous beings stood off to the side and watched the process of liquefaction.

Soon the concoction was ready and set out in a container on the floor in the usual manner. As Cupid, with Junior close behind, squirmed along in the direction of the liquid preparation, Dr. Spencer noted something which set him thinking deeply—something which he had observed several times before but which now loomed with startling significance . . . and promise. Directly in the path of the cupreous creatures there stood the galvanized iron trash can which had somehow, during the recent disturbances, got out of its accustomed place under the laboratory sink. Cupid approached the metal object, halted momentarily when

about a foot from it, and then made its customary detour. Junior was right behind its parent in this maneuver.

There was nothing unusual about the phenomenon—even though it had gone unexplained up to now. Almost from the very moment that Cupid had made its unceremonious appearance in the laboratory it had demonstrated that uncanny wariness for articles made of iron. With the advent of Junior the same queer behavior had continued. During all their wanderings about the premises the creatures had carefully avoided contact with such objects.

BUT now a certain suspicion began to dawn upon Dr. Spencer. He stood off to the side and eyed the two creatures feasting on the newly prepared solution—stood there and revolved in his mind this extraordinary behavior twist. He recalled how indifferent the cupreous organisms had been to all articles except those made of iron—how they had crawled in and around and over all manner of objects made of wood, earthenware, glass, stone, rubber with the utmost abandon. He racked his brain to try to recall their movements, and he was forced to admit that the enigmatic beings were completely at home when in contact with most of the articles and surfaces to be found in the laboratory, but were always careful to steer clear of any objects that were metallic in nature. He remembered their meticulous detours about radiators, the steel safe, the iron legs of the sink, the anvil in the corner, the oil stove. Somehow Cupid and its offspring regarded metals as dangerous to the touch.

But no—not all metals. Hadn't they dragged rolls and ingots of copper

from cabinets and closets in order to have liquid nourishment prepared for them? And how about the gold and silver articles which Cupid had come across in ransacking one of the drawers—bars and sheets of these precious metals that Dr. Spencer kept for experimental purposes? These Cupid had flung about disdainfully, crawled over them, pushed them from place to place with utter disregard. Several platinum crucibles and a quantity of platinum wire had been given the same careless treatment until rescued by the two men and placed back in the safe from which the articles had been removed for a recent experiment. Dr. Spencer even recalled how Cupid and Junior had accidentally spilled a jar of mercury. He remembered the complete abandon with which the creatures had wallowed through the silvery liquid as it rolled along the floor in its characteristic fashion.

Then it was not *all* metals that the cupreous beings shunned, but only certain particular ones, perhaps only *one* particular one, namely iron. So far there had been no opportunity to try other metals than these mentioned for their effect on Cupid and Junior. No—that was wrong. What about those three spent bullets which he had picked up? He was certain that they had passed through the jelly-like bodies of Cupid and its little product. There was that suspicious reddish deposit on the pellets—a deposit of metallic copper on the surface of the lead.

As Dr. Spencer stood there and regarded the gelatinous creatures absorbing the copper nitrate solution, he was suddenly overwhelmed by the realization that there was no need of further experimentation with other metals. There came over him a stag-

gering wave of understanding. The whole perplexing dilemma dissolved itself into nothingness in the abrupt manner in which a fog lifts. And the solution to the problem stood revealed in sharp, distinct outline—a solution that seemed almost ludicrous in its utter simplicity.

With a whoop of glee that would be more befitting a schoolboy than a staid and somber man of science Dr. Spencer turned and dashed into the room where Jordan lay. He must tell him the glad tidings, for he was fairly bursting with anticipation.

"I've got it, Burt! . . . I've got it at last!" he blurted in a stage whisper.

The assistant was still suffering from the enervating effects of his recent encounter with Cupid. He was conscious, but woefully incapacitated otherwise. At the doctor's exuberant exclamation he tried to raise his hand in a gesture, but could not muster sufficient strength and gave it up. Again his lips moved as though to question Dr. Spencer on his discovery.

"Never mind, Burt," soothed the chemist hurriedly. "Just relax—I'll take care of everything." He should have liked to confide his plan to Jordan, just to get it out of his system. But he saw clearly that it would be nothing more than a waste of breath and time—and both were now very precious. After all, he could handle the scheme very well by himself. It was simple—laughingly, ridiculously simple.

He hastened back into the laboratory. The quantity of solution which he had prepared for Cupid and Junior had evidently proved too much even for their omnivorous appetites. The organisms had by this time absorbed their fill, leaving the jar about

a third full, and were now on their way to a corner of the room, there to digest their meal in peace. Dr. Spencer chuckled to himself. Their position over in that part of the laboratory was just ideal for executing the plan which he was hastily building up in his mind. Oh, if only they remained there until

He cast a swift glance around the room. Recent events had disorganized the laboratory considerably. Things were now standing about in a manner entirely alien to this customarily well-ordered workshop. Dr. Spencer thanked the circumstances that had been responsible for this confusion. It would make things easier for him to put into operation his scheme for capturing the cupreous beings. For capturing was still uppermost in his mind, despite the terrifying experiences through which he and Jordan had recently passed. If there was even the remotest possibility of snaring Cupid and its offspring he would attempt it. To exterminate them ruthlessly would be a calamity, an irreparable loss to science. It would be the destruction of a golden opportunity to study a new form of life—an opportunity that would perhaps never again present itself. And the plan which he had hastily evolved should make the job of capturing the creatures a relatively easy one.

But what of the organisms themselves? Knowing as he did their uncanny powers of comprehension, could he hope to set the stage for his little drama without their realizing the danger that confronted them? There was nothing for him to do but to attempt the job, and hope against hope that his actions would not arouse suspicion before he could effect the master coup.

EAGERLY he set out on the new task. More copper bars came forth, more acid, and he busily engaged himself in preparing new solutions for his gelatinous guests. At least that was the impression he wished to convey to the pair of creatures resting in the corner. Immobile and apparently somnolent, following their last meal, they nevertheless followed his every action—of that he was supremely certain. He could almost feel their penetrating observation of him as he moved about attending to the various details of solution, filtration and evaporation that he was conducting simultaneously in different parts of the laboratory.

And throughout these manipulations he managed to drag out on floor and table, ostensibly to be used in his work of preparing the copper solutions, a most formidable array of apparatus. Article by article he succeeded in hauling forth from closet and cupboard every iron object, large or small, that was not nailed down or else too bulky or heavy to move. Dozens of ring stands and tripods, bunsen burners and iron pots, the old pestle and mortar, a discarded pair of steel scales—rusted and covered with the dust of months—sheets and rolls of galvanized iron; old heating plates, a small metal oven, assorted lengths of iron pipe, a hundred and one odds and ends of useful and useless equipment were dragged out to join the mounting collection scattered around the room.

But throughout his strange huntings about the laboratory he kept constantly occupied with the ostensible task—that eminently important one of preparing copper solutions for Cupid and Junior. In fact, Dr. Spen-

cer actually managed in some way to make use of—or else *pretend* to make use of—a fairly large proportion of the articles—pots, stands, burners, plates and assorted apparatus. Meantime he kept his eye on the creatures in the corner. Would they become suspicious of all this inordinate effort being expended seemingly in their behalf? Suppose they did? Dr. Spencer worked faster. . . .

At one stage in the proceedings the chemist was halted by a stirring in the other room. He glanced quickly through the open doorway, and was overjoyed to see that Jordan had raised himself to a sitting position on the cot. The assistant was gazing in bewilderment at the scene of activity in the laboratory. Dr. Spencer was delighted beyond measure. The setback suffered by Jordan had been, thank Heaven, only a temporary one. However, he did not feel that he ought now to relinquish his task and take Jordan into his confidence. He felt that minutes were precious, that he could accomplish his coup single-handed. After success had been achieved, he could explain the whole thing to Jordan. He called to his assistant with a smile and a cheery wave of the hand. The other, from his cot, returned the gesture with a hearty, although silent salute.

Dr. Spencer turned for another look at Cupid and Junior, and noted with alarm that the parent was beginning to stir. Was the creature at last becoming suspicious of this accumulation of metal? The doctor's pulse pounded furiously, his breath came in tense gasps. Even if Cupid were still glibly unaware of the plot being cooked up all around him, the organism and its young one might decide to shift their position from

their present ideal location in the corner, and spoil his plan—perhaps permanently.

In an instant the scientist determined that this was the moment to act. He hastened to the unfinished jar of solution from which the two organisms had recently been feasting and dragged it toward the corner, as though to make it easier for them to get their nourishment when they next desired it. At the same time, apparently by accident, he moved some of the smaller and lighter iron articles closer to the corner where the two beings squatted.

Cupid extended a pseudopod tentatively. Dr. Spencer moved faster. There was no point now in trying to conceal his intention. Seconds counted and he plunged forward, sweeping iron stands, pots and assorted articles before him. A definite barricade was now taking shape—a wall of iron objects that cut off the creatures' corner from the rest of the room.

AND now the true significance of the doctor's maneuverings seemed to sink into Cupid's intelligence. Its body assumed an ominous phosphorescence, it palpitated as though suddenly imbued with a superior energy for tackling the new danger. One side of the barricade which the doctor had just swept into being presented a formidable obstacle to the organism, but there were large gaps in the farther portion. Toward this part Cupid headed, but not with that lightning swiftness which it had previously demonstrated when it had so effectively blocked exit from door and windows. Possibly this sluggishness was due to the repast which it had so recently absorbed.

Dr. Spencer did not stop to figure out the why of the matter. He fairly flew toward the weaker portion of the wall, with both arms gathering in metal articles in his path. In a flash the gaping holes in the barrier were plugged up, and Cupid stopped short in its mad dash for freedom. It drew back and seemed to survey the situation. Junior, now jolted into action, hovered fearfully about its parent, as though looking to it to get them out of this terrible predicament. Gleefully Dr. Spencer dashed about the laboratory picking up loose articles and bringing them back to be added to the formidable wall of iron. Then he stepped back and surveyed his accomplishment with unconcealed satisfaction.

The vicious organisms were effectively trapped. From the radiator under the window on one side the accumulated mass of metal forming a line about a foot in height, swung in a quarter circle on the floor, to end up for its anchorage against the steel locker that stood tall and imposing against the other wall. In this sector, barely ten feet at its widest part, Cupid and Junior roamed sullenly, viciously, like a snared lioness and her cub.

"That'll keep them for a while," muttered Dr. Spencer in huge glee, and he continued his turns about the laboratory, gathering up every available iron object to add to the mounting wall. He tugged at the small anvil over on the other side of the room and with difficulty hauled it across to add strength to the barrier. He unearthed some bars of zinc, and several lead pots as well as some sheets of the metal. These he piled on the rest of the mass. If his theory was sound, then zinc and lead were as effective as iron in halting the cu-

preous creatures. And aluminum too. . . . He hurried into the other room where Jordān was sitting on the edge of his cot, surveying the chaos in the laboratory with questioning eyes.

"I've got them cornered!" shouted the doctor jubilantly. "Trapped! hog-tied! can't stop to explain now tell you everything later but we've won! *we've won!*"

He swept up an armful of aluminum pots and pans, a couple of iron skillets, assorted metal utensils, in fact practically their entire culinary equipment. It was a meager collection, but admirably suited for the present emergency. Back the doctor hastened and deposited the kitchenware with the rest of the aggregation of metal. He next procured a roll of iron wire from a drawer of the laboratory table and worked it in and out among the assortment of articles, weaving the entire mass together as thoroughly as his nervous fingers would permit. This barricade must be impregnable against any onslaught, and the doctor was determined to make it so.

When the assorted paraphernalia had been linked together with successive strands of wire into a more or less complete whole, Dr. Spencer stepped back and viewed his handiwork. It was a clever bit of workmanship, he was forced to admit to himself. Wedged into a corner of the room by a barrier that was taboo even to their very touch, Cupid and Junior could do no more than roam back and forth in their prison, their bodies throbbing viciously, and their tentacular appendages beating the air in a manner that bespoke complete frustration and bewilderment. Once Junior deigned to approach too

close to the metallic barrier. With a powerful sweep of its thin, jelly-like feeler Cupid promptly brushed its foolhardy offspring back to the safety of the far corner. Even in the tenseness of the moment this bit of parental control was refreshing to behold.

"Burt, are you all right? Can you come in here and see how nicely the tables are turned?" Dr. Spencer was loathe to leave the scene, even for a moment. He must stand there and gloat—actually gloat at the remarkable simplicity of his scheme, and its equally remarkable effectiveness.

"Coming, doctor!" called back Jordan huskily. "I'm feeling a lot better now and I've got to see what all this this commotion is about and just how you've turned the trick."

"Easy ridiculously easy," laughed the chemist, with his gaze still fixed on the exotic organisms encompassed by their metallic prison wall. "Why, Burt, it's so laughably simple that. . . ."

The words froze in his throat. In two seconds his astonishingly simple scheme was blasted into oblivion. With eyes that mirrored horror and incredulity he saw Cupid slide to the bare perpendicular wall of its prison and slowly raise its bulky mass up on the vertical surface. Its pseudopods reached forward, one above the other, engaging the wall with a sort of suction pull, and dragging the shapeless blob of colored gelatine after them.

Carefully, laboriously, Cupid worked its way up along the wall, while Dr. Spencer could do no more than stare open-mouthed at the uncanny demonstration of vertical locomotion. What a blindly optimistic fool he had been! The thought flashed across his con-

sciousness, mingled with a feeling of bitterness and chagrin. How juvenile, how stupidly asinine was this scheme of his, after all. To think of holding these terrible creatures by a puny barricade of junk! After the first surprise of their imprisonment it was no more than to be expected that they would find a way out. And here they were, actually giving him and his carefully arranged plan a cupreous horse-laugh.

Fascinated, Dr. Spencer observed Cupid lifting its clumsy body slowly up the wall. He saw that Junior did not follow its parent, but elected to remain behind in the prison—which had suddenly ceased being one. As though in a trance, Dr. Spencer watched Cupid ascend a vertical distance of about three feet on the surface of the wall, attain the window ledge immediately above the radiator, then begin to work its way carefully along the narrow sill.

IT was not until Cupid had reached the end of this shelf and had begun a slow descent on the other side of the metallic barricade that the doctor was jarred out of his hypnotic spell. With a violent start he was struck by the realization that he must defend himself. Malice and dire vengeance fairly oozed from the copper being as it let itself down to the floor—a descent that was accomplished with far more celerity than the climb on the other side.

The chemist reached down and pulled out from the heap of metal a short iron pipe. Before he had a chance to straighten up and meet the attack, the creature had reached the floor, swept across the few feet of intervening space, and thrown itself at him. With a hoarse cry the doctor attempted to swing his bludgeon. But

the suddenness of the onslaught half spun him around, and the iron pipe was flung from his hand. It fell clattering to the floor.

Cupid's tactics now were not those which it had so recently employed against Jordan—and with such calamitous results. Instead of effecting a football tackle on its victim, the creature twined its pseudopods about one of the doctor's legs and hoisted itself off the floor. The chemist beat the organism with his fists—and the beatings were as effective as were Jordan's under similar circumstances. And now Cupid had climbed up to where its weaving tentacles could encircle the doctor's body completely. Staggering under the weight of the creature, coughing, choking as the slimy appendages slid around his throat, the scientist was already beginning to feel his head swim—it was now only a matter of seconds before he too would succumb to the deadly contact of the copper organism.

"Burt! . . . Burt!" he rasped—as though Jordan could be of any earthly assistance.

He continued to use his arms as flails against the deadly creature, but weakly—hopelessly. His head reeled—he stumbled—the world turned black—then suddenly there came relief. Like a miracle Cupid's grip around his neck was relaxed, although its dead weight still hung on his body, like the albatross of the Ancient Mariner.

And now vision came back to him—a blurred, distorted vision. He saw the wedge of floor with Junior still inside the barricade. But the younger organism was now moving slowly, hesitatingly. It was creeping up closer to the wall of metal. In a flash Dr. Spencer took in the situation, and understood. So that was the rea-

son why Cupid had so suddenly halted its murderous onslaught! It too understood—had probably grasped the thing even faster than had his own befuddled brain.

There was Junior edging closer to the metallic heap—to a portion of it which presented more open spaces in its structure than any other part. Immediately on the other side of the heap stood the unfinished jar of copper solution where Dr. Spencer had deposited it just as he had made his first sudden sweep-up of tripods, ringstands and assorted ironware. The intentions of Junior were unmistakable. It wanted to get at that jar of liquid nourishment, and, with the characteristic foolhardiness of youth (cupreous or human, it did not seem to make any difference) the little organism was heading straight for its objective—and to blazes with all obstacles! Either it had not the ability of its forebear to circumvent the treacherous metallic wall by vertical locomotion, or it cared not about consequences. At any rate there it was, steering right for the jar of solution, perhaps with the idea of being able to squeeze through the barrier unharmed.

All of this Dr. Spencer took in by one fleeting glance, while Cupid still hung on to him tenaciously. Then an astonishing thing happened. Cupid suddenly detached itself from his body and made a flying leap through the air. The reaction of that huge mass as it hurled itself from his chest and abdomen flung him violently backward and he landed precipitously in a sitting position. Overwhelmed as he was by the suddenness and the energy of this thrust, the doctor was nevertheless able to see clearly the remarkable drama that was enacted right before his eyes.

Cupid's motive was obvious—to hurl itself back into the enclosure and stop its scatter-brained progeny from committing suicide. But the creature miscalculated the distance—more probably the body of Dr. Spencer was too unstable a medium for it to exercise the required backward thrust. At any rate the mass of inorganic gelatine, hurtling through the air, failed to clear the barricade by inches—and what fatal inches! It slithered across the crest of the heap, became entangled in the projective legs of a tripod and crashed into the enclosure, dragging the metal object with it.

But the tripod was not an isolated unit. It had been fastened by hastily twisted strands of wire to other articles that made up the heap of metal. Burners, pots and stands came clattering into the arena with the unfortunate creature. And thereupon was enacted as bizarre, as thrilling, as blood-congealing a spectacle as it ever had been given to human eyes to witness.

The instant Cupid hit the floor it became convulsed with an energy that it had never displayed before. It heaved and floundered and beat about in a desperate effort to free itself from the iron articles. But the tripods and other assorted apparatus seemed to burn into the creature's body as though these prosaic articles had themselves become imbued with life. Wherever the metal came in contact with the unhappy organism the glistening, jelly-like surface was seared as by the thrust of a white-hot poker.

In the throes of mortal agony Cupid hurled itself violently about on the floor. Its desperate struggle served only to drag more of the iron wall upon it, since the whole mass

had been more or less loosely bound together by the doctor. Junior, the unwitting cause of the tragedy, was itself overwhelmed by the avalanche of twisted, tangled metal. The chemist could see it floundering about under a mountain of junk, and then it became indistinguishable from the thrashing bulk of its parent's body. The whole mass resolved itself into a churning, heaving, clattering mixture of bluish-green jelly and a hundred and one metal articles of every size and description.

Soon an ominous black ooze spread over the floor and was spattered in all directions by the titanic struggle. More ominous was the dull reddish tinge being acquired by each object as it came in contact with the doomed creatures. During the course of the battle—if such this spectacle may be termed—the fused mass of Cupid and Junior hurled itself against the radiator that had formed an anchorage for one side of the barrier. When the palpitating hulk fell away, it left a vast blotch of dull red hue on the metal. In a few moments every article of the now disrupted barricade was similarly covered with a thick layer of that reddish deposit.

ALL through the time that this epic struggle was taking place, Dr. Spencer remained in the sitting position in which he had been flung by the initial leap of Cupid. It seemed like hours since that mighty thrust had floored him, but it was actually only seconds. His head still reeled from the shock. He could still feel those repulsive tentacles about his throat, although those very appendages were now engaged in a death encounter with a scrap metal foe. A quick glance at his hands revealed a faint bluish phosphor-

escence—that same eery imprint which Jordan had carried away with him, following his clash with Cupid.

Suddenly an inundating wave of weakness swept over him. His brain swam. The sight and sound of the terrific battle in the corner of the laboratory became blurred in his consciousness. It was the poison from the copper organism . . . from contact with that gelatinous substance . . . his mind struggled with the idea . . . vaguely he thought of Jordan and his predicament . . . that queer toxic effect of the jelly-substance . . . and now he himself had fallen a victim . . . but Jordan . . . where was Jordan? . . . He called his name—the words jammed in his throat—the room went spinning in kaleidoscopic circles—faster and ever faster—and then came blackness. . .

Dr. Spencer opened his eyes to see Jordan bending over him. He sat up weakly. He was still in the same spot where the flying Cupid had hurled him. Jordan, himself still pale and shaky from his own ordeal, was ministering to his stricken chief. It seemed to the doctor that he had been unconscious for only a few seconds.

"Twelve minutes, to be exact," said Jordan, in reply to the question on Dr. Spencer's trembling lips.

"And the creatures? . . . the struggle? . . . What of . . .?" The chemist broke off in a little gasp.

"It's over, doctor," announced Jordan simply. "There's nothing more to be afraid of. Look!"

Dr. Spencer stared, and his eyes opened wide with incredulity. The corner of the laboratory was a shambles, comparable only to the results of a dynamite blast in a junk yard. But Cupid and Junior were nowhere to be seen. The sole evidence that they had ever existed were sev-

eral irregular pools of dark liquid on the floor—and the predominant reddish hue visible on practically all of the metal articles lying about. Here and there on projecting parts of the scattered debris hung shreds of bluish-green membrane—remnants of the semi-permeable skin which had encased the bodily substance of the creatures. And these were all the earthly remains of the once formidable beings. . .

The doctor rose unsteadily to his feet, stumbled forward a few steps, then sank on a nearby stool. He surveyed the scene and shook his head ruefully.

"Too bad . . . too bad," he muttered. "I might have saved at least one of them . . . just for the sake of science. But who would have foreseen *this* . . ." with a sweep of the hand at the picture of utter devastation.

"Of course, Burt," he added as though it were an afterthought, "you can readily see the reason for this . . . this turn of events."

Jordan nodded comprehendingly. He had been an astonished observer of the extraordinary spectacle almost from the very first moment of action. In addition, he had been the sole witness to the climax of the episode during those minutes when the doctor had been under the toxic effects of Cupid's attack. And he had instantly grasped the full significance of the chemical action involved in the sudden demise of the copper beings. It was so confoundedly elementary. . .

Nevertheless Dr. Spencer went on to elucidate—more to hear himself repeat the explanation out loud than to impart any information to Jordan.

"A simple application of the *Electromotive Series*," he mused. "A metal in the series will replace any

metal below it in solution and be replaced by any metal above it. If a piece of iron is put into a solution of a copper salt, the iron goes into solution and the copper is deposited out in metallic form. That's an experiment that every high school chemistry student has performed. And not only will iron produce this change, but also the other metals standing higher than copper in the *Electromotive Series* magnesium, aluminum, zinc, nickel, tin, lead all of them have the power to precipitate copper from solution. And so that is the simple fact that is responsible for the destruction of our strange beings. It seems that the gelatinous structure of these organisms was really a form of solution—a highly concentrated solution of copper salts. And the membrane must have been of such a nature as to permit the passage of metallic ions in

either direction. That's why the precipitation of copper began the instant that Cupid and Junior came into contact with these metals. But the creatures must have realized the limitations of their existence they sensed the dangers of contact. . . . Cupid avoided the harmful metals scrupulously but the young one had much to learn and his ignorance and haste proved the undoing of both of them. So there are our two strange creatures deposited in the form of thick layers of copper on every article of metal which they touched. And there, in those pools on the floor, is an equivalent amount of iron and lead and aluminum in solution. Again I say, Burt, what a pity to have lost such a golden opportunity to study a form of life which may never again return to earth. . . ."

Jordan nodded a mute assent.

THE END

Science Questionnaire

1. How were pyramids supposed to be erected? (See Page 7)
 2. Could high buildings be successfully erected with stone as the only material? (See Page 7)
 3. What would be the effect of attempting this in a thousand-foot building? (See Page 7)
 4. What example of old-time accuracy can be found in ancient poetical compositions? (See page 8)
 5. What examples of superstition do we find in the days of Homer or Herodotus? (See Page 8)
 6. How did the statements of some prophecies of the ancient oracles carry out the semblance of prediction? (See Page 8)
 7. What do the stars say? (See Page 8)
 8. How do the planets vary in their distances from the earth? (See Page 8)
 9. Give an example of the variation in the case of Jupiter? (See Page 8)
 10. What is the basis of the "light-year"? (See Page 9)
 11. What distances are measured in light-years? (See Page 9)
 12. What are the signs of the Zodiac? (See Page 9)
 13. Is it possible that the inclination of the earth's axis will disclose the future? (See Page 9)
 14. What does the term "flying-auto" mean? (See Page 15)
 15. What effect would high altitude have on the operation of airplane propellers? (See Page 17)
 16. How could fire be produced without matches? (See Page 53)
 17. From what language is the word "history" derived? (See Page 56)
 18. What planet bears the name of the morning and evening star? (See Page 71)
 19. In dissolving copper in nitric acid, what colored fumes or gases are produced? (See Page 94)
 20. What metals represent a group that will decompose copper salts? (See Page 111)
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Antares Tryst

We are very glad to present a story by this author with whom our readers are well acquainted. The story starts with a bachelor of science and his achievements are to be found in the text.

By RICHARD TOOKER

CHAPTER I

"**I**NSCRUTABLE Universe!" Van Marr exclaimed impatiently as he reached out languidly to the chromium wall at his right and pressed down a small, sliding knob. "Why must I persist in continuing this miserable farce of existence! Speaking of social pariahs, I should take the golden apples of Ladon. How was it they expressed it in the silly, old Machine Age—'so what'!"

A cabinet of glasses protruded noiselessly before him. He poured a pale red, wine-like liquid into a tall glass and drank slowly, his dark eyes brightening with an inspired visioning. He could dream, at least, of life with Lydas on that world of Antares, though Le Hoyt's experiments never passed the theory stage in effecting his actual contact with that love-goddess of alien space.

As he drank a soothing sensation flowed through him, like the relaxation of the nerves preceding sleep. His clear skin freshened with a pink, healthy flush. The potion he sipped was not a narcotic; no depressing reaction followed its period of stimulation. It was *vitapol*, a vitaminized, gland tonic that long since had supplanted alcohol, opiates, tobacco and even tea and coffee in that sixtieth century of the Mind Age.

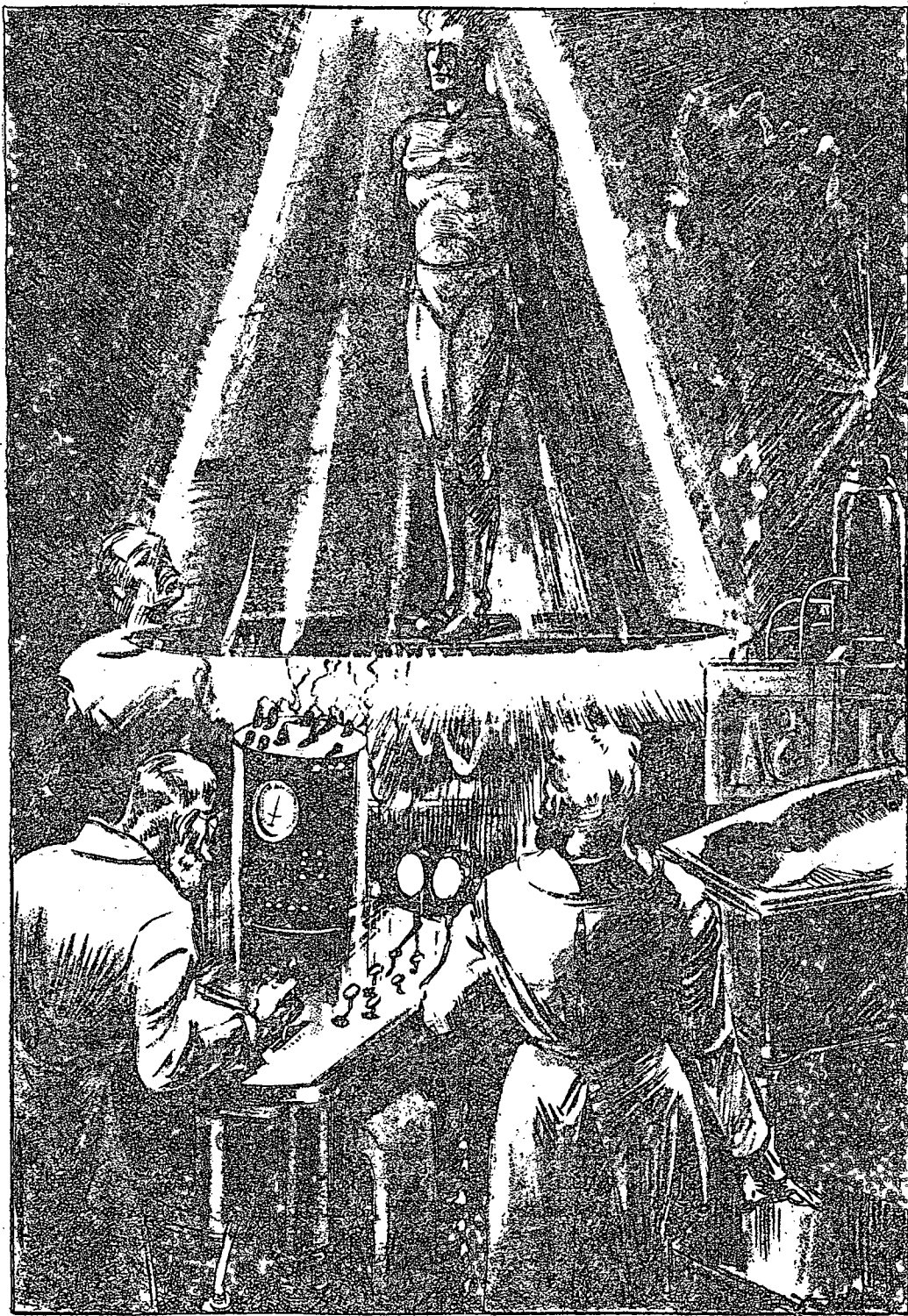
"Ho-hum," he yawned, "I suppose

Le's experiments are really an incentive for me to keep up the fight. He can do no worse than kill me if the process gets that far."

His voice resonated oddly in the sound-proof room as he drained the glass, reversed the knob on the wall and the liquor cabinet vanished as noiselessly as it had appeared.

The hidden liquor cabinet was representative of the severely plain, yet subtly artful appointments of Van's bachelor quarters in Edison Sector. Dove gray, chromium walls, paneled with mottled smoke-blue at wide intervals; a deep, high, convex window in one alcove corner. Air cushioned chairs that were veritable mechanical cradles—a low, massive table of a material like cloudy, green glass. At the center of the dull bronze, resilient floor gleamed the flushly countersunk dial of an atomic calendar clock. A flat, opaque globe in the ceiling rayed a sunlike light, which automatically dimmed or intensified with changes in the outer atmosphere. The air of the hermetically tight apartment was singularly pure and bracing, precisely temperatured by soundless air conditioning.

Van Marr himself was man grown subtly to match his perfection of living equipment. Not delicate or stunted, yet strong in a superfineness of physical structure that was delicate in its surpassing beauty of eugenic



An unearthly holocaust of light played on the upright body.

development. Tall, lithe, broad-shouldered, Van sprawled in the spidery easy chair. His brilliant black eyes gleamed somberly from half-closed heavy lashes. The high-bridged, patrician nose might have been tyrannically cruel in a less sensitive face. A mouth, short, sharply curved from tip to tip of the full, red lips—the mouth of one born to synthetic, concentrated foods. The teeth alone were delicate from evolutionary disuse. He wore a simple jerkin of filmy, but durable, cellulose and closefitting, trunk-flared breeches. His shoes looked like maroon velvet, but they were made of a steel-rubber compound, tractile as living skin and tough as whalebone.

He turned and looked speculatively at a helmet-like device on a taboret at his side, then picked it up like a Hamlet addressing a skull. The metal parts of the strange device were lighter than aluminum, simply yet beautifully designed. He placed the set on his shaved skull, scarcely conscious of its weight. It fitted perfectly, somewhat like a medieval knight's casque, with the crest athwart the forehead. Sealed in the light, dense metal were millions of synthetic neurons, attached to literally thousands of sensitive filaments like nerve ganglia in close contact with the cerebral pan. At the nape of the neck a small, bulblike case enclosed the atomic power unit.

It was the famous Prade brain radio that Van had placed on his head. As he touched a tiny switch at the base of the helmet a faint, pulsating light sprang up in an opaque inlay fronting the fan-shaped crest—the focal point both for transmission and reception of the thought impulses.

THE Atomic Age, following the epoch of interplanetary exploitation, had been capped by a transcend-

ing miracle of science—the discovery of *telos* or thought-waves and the materialization of their reception and transmission by the human brain. The release and control of atomic energy had accounted for this epochal stride in human progress.

Centuries before even the Machine Age, men believed that brain processes gave off radiations which explained the "sixth sense", and occasional, inexplicable phenomena such as "second sight" and the influence of one's moods on others closely associated in life. Then Paul Prade, wizard physicist of the forty-sixth century, had startled the worlds of the Terran sun system with unquestionable proof of the radiations and receptivity of thought impulses. Through a cranial attachment composed of synthetic neurons in a sound-proof housing, powered by an atomic projecting unit, Prade had successfully projected his thoughts to an assistant equipped with a complementary receiver.

A century or more of experiment and research had passed before Prade's thought transmitter became practical. But when, as television in the Machine Age, the brain wireless had been perfected for common use, civilization had made a leap to perfection never before equalled. The dreams of ancient metaphysicians had literally come true. Thought communication became a common method of transacting business as well as of conducting all forms of social intercourse.

But far more revolutionary, than *telos'* magic in general communication, was its amazing influence on individual thinking and morals. With the amplifying unit in operation, the pure and impure, the intended and not-intended thoughts were radiated. Inharmonious personalities instantly discovered one another, while kindred

souls were likewise mutually disclosed and united. One's enemies were disarmed, one's friends established profoundly. Men learned rigid mental discipline; the mind's construction no longer could be hidden by the face.

A climacteric of the social schism following the general use of the Prade brain radio was its astounding influence on the amative relationships of men and women. As no two individuals were exactly alike as to personality, so no two prospective mates were equally complementary. It was early ascertained that through the *telos* helmet one's ideal life complement could be immediately contacted among millions.

Divorce had been virtually abolished. Promiscuity was a barbarism of the ancients. So aesthetic in sex had the race grown, that it was considered a rare tragedy if a man or woman failed to find an ideal mate. Yet tragedies there were in this regard. Every year, to the puzzlement of the *telosogists*, isolated cases of abnormal mating propinquity were reported. It was sensationally demonstrated by these anomalies that all life-forms throughout the Universe were closely related, and dark archives were written of men and women who committed suicide, because their mating complement was a beast

VAN MARR was one of these rare tragedies of the sixtieth century aesthetes. Since adolescence the calls had been coming, more and more distinctly as he matured and the amative need grew more resistlessly imperative. He had lived in secret terror at first, until a *telosological* clinic had assured him that, however unfortunate, his seeming hallucinations were entirely within the scope of natural development. He had an incredibly alien

mate complement, and apparently there was nothing that could be done to help him. The remotest dreams of the space-navigators could not as yet visualize the actual bridging of the abyss between star systems, and Van Marr's complement lived somewhere in the system of Antares, 112 light years distant.

Antares, red sun of Scorpio! He both hated and adored the connotations of the giant star. Somewhere in its monster gravity lived Lydas, his ultimate complement—entity of an incomprehensible race of brain creatures. They, too, had mastered the transmission of the *telos* wave. Through incomputable mutations of evolution, Van Marr, Earth man, had found his counterpart in a form he could not visualize, though every atom of him longingly responded as he caught up the *telos* radiations that spanned and permeated the infinite like cosmic rays.

Thought, that knew no barriers, no limits—thought, in comparison with which light was a sluggard—thought had been transmitted from Antares to Terra. Why, then, could not the next great stride materialize in the remarkable work of his friend, Le Hoyt—the entity of the soul transmitted—mind to pass where matter could not?

Van was sadly considering his desperate faith in the miracle of science that Le Hoyt planned as he prepared to span the infinite in thought—to speak to, if not to see and own, his Lydas of the distant star world.

He sat inertly still now, body relaxed, eyes vacant in the preoccupation of intense concentration. Not even his lips moved. Transmissions were effected in the vocabulary of thought, which recorded chapters in the time that a phrase could be sounded by the vocal chords.

"Lydas Lydas Lydas" was the oral interpretation of the *telos* code which Van transmitted by the sole means of intense concentration, his helmet doing the rest. The lights in the head-crest glowed deeper, intensely agitated. Tiny globules, motes of color—pink, violet, sun yellow—foamed and spun and faded in the crest-inlay, like optical illusions seen after looking at the sun.

Van was like a man in a trance. He was receiving as well as sending. Across the abyss of interstellar space the entity of Lydas spoke in the Esperanto of the Universe—the dynamic language of pure thought. Names were connotative vibrations, ideas were mind pictures of dramas of sense stimulation, from brain to organs instead of organs to brain.

"Van! Van Marr Van Marr" Lydas *telosed*. "You will come? You are thinking of Le Hoyt's *telos* mutator. . . . We are ready if you try. Oh, the tragedy of this separation by abysses of space! We are so helpless—so near in thought, so distant in form."

Interspersed with unbroken reception, Van transmitted response. Without pause or interruption the soundless interchange of thoughts went on, yet there was no confusion, not the slightest misunderstanding within the limits of each intelligence to understand a remotely alien viewpoint and life conditioning. It was as if two persons talked at once in mutually perfect intelligibility.

"I intend to give Le's theories a trial," Van *telosed*. "In fact, I would try anything in my circumstances. Death of the body can mean little after the travesty of life I have lived and am living. If Le Hoyt fails, my sorry part in this romance of worlds will be automatically finished, which

is some consolation. . . . If I might only conceive what you are like physically, Lydas—before the end."

"And if I could conceive what *you* are like, Van Marr!" came the answer across the void of space. "How strange that only minds are alike in our sun systems. I can never cease marveling at the miracle of this affinity we have found between worlds."

"You may marvel at the miracle of it," Van *telosed* bitterly. "I marvel at the tragedy of it. There are times when I am base enough to curse Prade's *telos* magic. Without it, you and I might have been unhappy in this life, but we would never have known that happiness was possible."

"For shame, Van! You child of a young world! We of Os are much older in evolution, my dear. When you come we shall teach you many things about resignation — about mind's mastery of itself and its environment."

"When I come!" Van echoed dolefully in the lightning-written volumes of pure thought. "But I am keeping you long, Lydas. I must *telos* Le Hoyt. Perhaps we can talk in person tonight. You see we still enjoy personal contacts here on Terra. A small sacrifice of efficiency to pleasure."

"Tonight, you say? Night is a strange concept, Van. We never have it on Os. But you must leave me. Le's work is more important now than even these precious moments. It may mean consummation for us, dear. Oh, I can't bear to think of it! Hurry! Hurry! And please use your helmet more often. There is no response sometimes, and I am lonely—lonely among millions, even as you."

"Goodbye," Van *telosed* mournfully. "I hardly dare dream that we may meet soon. But it is that or the eternal dark for me. Sometimes I care

little which, if it can only be either."

"Goodbye, Earth One—for now."

Van's eyes flickered with returning supra-consciousness. He reversed the helmet switch. The leaping lights faded to dull gray in the inlay of the crest. A moment he rested, then the switch was closed again.

"Le Le Hoyt Hello, Le Hoyt Van calling. Are you at work? May I see you soon—this evening?"

"Hello, Van! Yes, I am busy. I had forgotten there was a world outside the lab. But I have much to tell you. This *telos* will not be clear concerning the mutator. There are phases that still puzzle me, perhaps always will. Yet there is progress—much progress to report. Come at six. Alys will be waiting, if I'm not out of the lab then. . . ."

"You may expect me at six," Van concluded.

Again the switch clicked off. Van removed the helmet, replaced it on the taboret stand. He got up restlessly, glanced at the floor clock. Two hours yet before his appointment with Le. He stepped to the lofty, bright window alcove and looked out.

In the foreground of a grandly domed and spired skyline a paved landing field spread its marble white expanse below the apartment sector on the thirtieth terrace of which Van lived. Huge transport liners were landing and taking off at the far end of the field, their cargoes emptied and loaded automatically through chutes leading to subterranean freight conduits. There was no surface traffic. Beyond the landing field other apartment sectors towered like jagged, alabaster Babels. Massive, arched bridges connected a few of the towers—bridges that were a riot of flowers and tropical trees—the hanging

gardens of a sixtieth century Babylon.

Van drew a small but powerful glass from a case at his belt and scanned the distant terraces wistfully. Through the gardens, that decked the aerial plazas, men and women were strolling, chatting, drinking—or lost to themselves in the semi-coma of *telos* communication. He could see them laugh—even the movements of their lips as they conversed. All were supernally happy in an Elysium of beauty and peace. He felt egregiously alone amid this heavenly splendor of his kind.

With a low murmured lament he snatched the glass, thrust it back into the belt carrier, and began his leisurely toilet for the visit to Le Hoyt's sector.

CHAPTER II

AT five minutes of six, without consciousness of his precise punctuality, Van donned his helmet and took the elevator to the aerial taxi stand on the roof of Edison Sector—more than a thousand feet from the ground floor of the stupendous structure.

Hundreds of compact, torpedo-shaped aircraft, with cabins of unbreakable glass-substitute, awaited him in neat stalls around the outer edge of the great platform. High above him, on luminous pillars, a roof of transparent, sunlight-filtering crystal glittered like a motionless veil of cumulus clouds.

Scores of passengers were entering and leaving, taking off and landing. A child could operate the atomic cabs, which were automatically reversed and braked upon approaching a solid.

Van climbed into one, turned a knob on the dash. A low hum of the gravity

nullifying mechanism, and he moved off the platform steadily, quietly, steering, backing, ascending or descending by mere corresponding pressures on a cane-like rudder at his side.

So far below that the haze of distance partly obscured it, the city lay as he glided away from the roof of Edison Sector. Aircraft thronged the skies, their courses regulated by slender pylons whose peaks were lost to view in the mists of the early evening sky. At graduated intervals on the pylons huge, lighted numerals indicated the altitude and district—the lanes of air where specified vehicles might fly. Accidents were virtually unknown at the slow speeds possible at low altitudes in the government-built craft. Man had overcome his childish mania for useless high speeds. Speed had taken its proper place—in the almost airless stratosphere or underground in sealed, pneumatic conduits.

At two minutes of six Van depressed the controlling helm of his taxi and settled to the roof-drome of Radio Sector. At precisely six, the punctuality having required no conscious effort or anxiety, he presented himself at the numbered door of Le Hoyt's apartment on the forty-sixth terrace. He pressed a pearl-topped button, above which was a small, oval television screen. Inside, his face glowed up in a receiving screen that was the substitute for a door-bell or lobby telephone. A moment later the door slid open and Van entered the home of his distinguished friend.

Le Hoyt's apartment was pentagon-shaped and much larger than Van's bachelor quarters, for Le was a family man. Bright-hued walls, paneled with intaglios of simple forms attractive to children, lent a singular cozi-

ness to the salon or central room, from which all other rooms opened through the collapsible walls.

A fine-figured woman of indeterminate age, in a stolla of shimmering silver, caught at the waist with a gold-threaded cord, came forward to welcome him.

"You are so commonly punctual, Van," she called to him in a voice that was almost laughter.

A sheer silk turban, in place of the out-door worn helmet, crowned her full, smooth brow like a snowy diadem. Women were still conscious of their shaved skulls, necessitated by the exigencies of thought projection.

Van smiled facially into Alys' gray, luminous eyes as he said, "It isn't hard to be punctual when one's life is at stake."

"Oh, but it isn't that bad surely!" Alys chided. "Sit down and relax. You look as gloomy as a night on Venus. Le ought to be in from the lab any moment."

VAN sat down with a sigh of relief. He was at home with Alys, Le's mate complement. "You expect a deal of me," he made an effort at cheerfulness. "A man about to be deatomized to escape a worse reality isn't likely to dance rigadoons like a Martian monkey."

Alys laid a white, smooth hand on his arm. "You're taking this entirely too hard, Van," she reproached him. "Why, you ought to feel positively exalted. If Le's experiment succeeds you'll be a hero with Prade and Lortell, the moon navigator. And Lydas!—to possess a goddess in an Antarian garden should be incentive for anything."

Van sighed as he took off his helmet, set it down on a taboret stand. "To Hades with heroism," he mur-

mured, wearily—"and as for Lydas—she's more likely a blob of ionized protoplasm than your goddess in human form."

Alys sat down on the blimplike arm of his chair and tried to cheer him. "You are almost convincing, Van, in your pessimism. But the Prade helmet never lies. You're a bright, brave spirit under your dark philosophy that death is the only goal. Wait till you hear what Le has to tell you!"

He looked up at her adoringly. "You're a lovely friend, Alys. I envy Le! But you, nor he either, can ever conceive what it means to live the half life. 'Man alone' was endurable in the days of the ancients when ignorance was bliss. Let's see—Le was twenty and you eighteen when you filed conjugal registry after the clinic had passed on your declaration of complement. Ten years of the perfect life you have had—your nursery blessed with children of your own blood. Well, you can afford to laugh at me."

"Van! As if I could really laugh at you! Why—"

The swish of an opening wall interrupted them, and they turned with eager welcome as a short, powerfully built man entered, clad in a soiled, armless coverall of synthetic cloth.

"Hello, Van," Le Hoyt's voice rumbled vibrantly. "You're on time, which is more than I can say for myself. What a day!"

His eyes were tired, his broad, square-jawed face deeply lined. A man of relentless determination, unflagging purpose, yet the hard-lipped mouth was somehow kind, the shining blue eyes serenely clear—clear as the conscience of one who fought only battles of the mind.

Van's demeanor brightened measurably as Alys leaped up and ran to

Le's arms. For an instant the eyes of the complements met as if in some mystical exchange of vitalic magnetism. Then Alys excused herself with the murmured mention that they would want to be alone. Her good-night smile dazzled both as she vanished through a wall panel leading to the nursery.

Le Hoyt eased his Herculean frame into a pneumatic chair, opened a liquor cabinet and drank deep of *vitasol*. The last of the tired look departed from his genial, rugged features as he wiped his lips.

"A damnably hard day," he muttered, ruefully, "but well worth it, if only because permission came from the Telesogical Bureau for our experiment. I should be ready within a week. I can laugh at my flounderings for the past five years. It's all simple enough with the end in sight."

"The sooner we put it to the test the better it will suit me," Van said. "Mars damn it, Le, with friends like you and Alys I fell like an ingrate—but I honestly prefer suicide to this suspense—this interminable misery of feeling like a beast in a zoo. But don't tell me you've done all this just for me and that Antarian twist. Your reward will be even greater than mine—if we succeed."

Le pondered, "I don't know which I covet most—the scientific glory of transmitting a psychic entity to a star world or seeing you find the ultimate verity with Lydas. But rewards are fictions after all—deeds are facts. It's the doing of it that grips me."

"But the proof!" Van trebled his concern. "If I'm unable to communicate how can you prove I survived the process? The brain radio can't be mutated."

"I've considered that," Le said after a moment. "My trust lies in the

conviction that, through the vitalysis process, you will actually reach this Antarian world as pure mind-entity. Once there, re-embodied as those Osans say they can do for you, you can communicate by the same means employed by Lydas and her kind for interstellar communication."

"Perhaps," Van was dubious. "It seems incredible. I wish I had your faith."

Le clenched an acid-stained fist in his earnestness. "You'll not need faith, Van—only *will*. Hell or heaven can't stop you once the *telos* entity is free." He got up restlessly. "Come on down to the lab and we'll go into details. Alys and I have been thinking and talking nothing else but mutation for months, and I'll have you fanaticized, too, before you enter the fusing cone for the great test."

THEY passed through the panels whence Lee had appeared a few minutes before. A pneumatic lift settled them quickly to a floor below. As they stepped out of the lift, lights flashed on in the low-domed ceiling of a large, almost circular compartment. Shelves, cabinets, bins crowded the walls, all indexed and containing odd apparatus, jars of chemicals, materials of every description. Automat lathes, drills, glass molds, crucibles, bulked up grotesquely from steel benches arranged like the spokes of a great wheel in the center of the littered floor. Derricks and hoists dangled from steel spans overhead. Atomic power had made factories out of laboratories in the Mind Age. Here Le Hoyt worked from choice, as in a former age men had played at games and dissipations.

Le led the way to the far end of the eerily quiet laboratory. Van's eyes lighted with quickening interest

as he observed the intricate perfection of the mutator, which, when he had last seen it, had been in apparently hopeless confusion of parts. A massive, transparent cone stood on a rotund base of gleaming beryllium alloy, which contained the powerful converter tubes. Like an immense, copper-sheened bubble, beside the base of the cone, stood an atomic-power unit. Behind the cone and the energy expulser, bank upon bank of tapered, metal drums towered pipe-organlike to the ceiling, all connected to the base of the cone by intricately twisting coils like the bodies of embattled serpents. Van knew that in these forests of drums lay the secret of deatomized mutation—the separation of consciousness from flesh—mind from matter.

"Magnificent!" Van breathed. "I could ask no greater honor than to be the first human organism to experience its miracles of transformation."

Le's big lips quivered, "I've lived with it for years, Van," he said, worshipfully. "If it fails, I fail with it. There's more of me in that machine than in the carcass that stands beside you, Van. But it must not fail! The higher destiny of the race—of all mankind is at stake. Psychic mutation is the only step in advance that science can conceive today. Failure means we'll surely slip back, for evolution never rests at one plane. And if—*when*—we succeed with our experiment, men will at last achieve the ideal entities of their gods. The whole meaning of life will change. The materiality of soul transmigration will be a fact—and you, Van—you will be the first to experience it!"

Le's passionate sincerity filled Van with a vicarious exaltation. For seconds he could not speak—could only stare in wonder at the marvelous me-

chanical conception which might deify a flesh-chained race.

"Have you tested it with a living organism?" Van finally found voice.

"Yes, several," Le seemed more himself again as he launched into practical details. "But you know how difficult it is to prove that the intelligence actually lives after vitalysis of the tissues. The Prade thought detector is of no efficacy in communicating with beast intelligence, where there is no supernatural propinquity of vibrations. Yesterday I mutated an ape, but the psychological reactions of its mate were the only proofs that I succeeded in preserving the *telos* entity. The same is true of all animal forms. Isolated, live specimens, caged near the mutator, are agitated after vitalysis of their mate is complete. They seem to sense an invisible presence of harmonious vibration. It seems that the primitive will power of a low organism, even, drives it back to its kind immediately upon being freed of the body. Embodied entities of kindred vibrations sense the disembodied entity through the sixth sense. These reactions of the live specimens continue sometimes for several days. My theory is that the living animals gradually become accustomed to their invisible companion."

"That seems to be proof enough," Van admitted.

But Le shook his head slowly, "There's never enough proof in this business," his voice boomed solemnly in the tomb-like silence of the big laboratory. "Before I trust the life or the sanity of a friend in a machine of my making I want to be sure."

"You need have no qualms as to sacrificing me," Van laughed bitterly. "I'm eager for the test. If you say the word my brain and body are yours at this moment to do with as you will."

"Because you would rather die than live," Le murmured, sadly. "I'd be encouraged if I thought your eagerness implied a conviction of faith in the experiment."

Van shrugged, "I hope my motives won't detract from my utility. Your friendship has been one of my chief reasons for hanging on as long as I have. I'd like to contribute something to your own happiness with what remains of me."

The centuries-nurtured aesthete was uppermost in Le Hoyt as he swung to face Van, seizing his shoulders in an iron grip.

"Have faith, Van!" he cried in a voice that was half a sob. "I swear I can send you to Lydas in the star system of Antares. I know it can be done—and you shall be my proof!"

Van's black eyes gleamed with responsive elan, the defiance of one who laughs at death, in disdain of what life holds for him.

"Now!" he challenged.

But Le shook his head with the flicker of a smile.

"A week from to-day," he promised. "A week from today, if all goes well, you will realize immortality. All I ask is that when Lydas and her kind re-embody you, you call me back. Let me have incontrovertible proof that I have scaled the last pinnacle of human progress."

"You needn't ask that," Van said as their hands met in a pact of death or everlasting life.

CHAPTER III

IN the ensuing days Van quietly arranged his affairs as one who prepares for death. He was glad that his mother had not lived to see his end. His tragedy of an alien complement had been partly responsible

for her early death, yet he believed the shock of his probable life-sacrifice, in the proving of Le Hoyt's theory of mutation, would have hurt her worse and made her end more violent had she lived to see it.

Jo Marr, Van's father, on six-months' duty as supervisor of loom-robots, was resigned. In the master chamber of the great synthetic textile factory, deep underground, Van informed his father of what he and Le Hoyt had planned. The old man, saddened by the loss of his complement, had secretly planned his own death within the year, which partly explained his eagerness to see some solution of his only son's life problem.

"I am proud to have a son with the courage to face this ultimate adventure," Jo Marr said, his great, dark eyes alight with hopeful visioning. "This is a last chance of happiness for you, my son, and at worst a noble sacrifice in behalf of science. If Le Hoyt succeeds it will mean immortality for Earthman—not that I would care for eternal life without your mother—"

He took Van's hands in his and his voice trembled. "Van—my son—I give you, with all that is in this failing, old heart of mine, to Le Hoyt's experiment."

Van's eyes were moist and shining. He knew what a struggle this calm, inspiring farewell cost his father. Jo Marr's courage braced him like a strong, steady wind.

"You will be with me at the last?" Van murmured. "Le will admit you I am sure."

"If my presence will not interfere," Jo said. "And if the experiment succeeds you will be able to *telos* me."

"Certainly! You and Le Hoyt and Alys and a few others of kindred *telos*. That is, provided I can be re-

embodied by Lydas and her kind—and can use their *telos* methods. The Universe alone knows what these creatures of Os are like. They may be gods in their world and worse than beasts in ours—but we can't question the veracity of the complement vibrations. If Lydas can't offer the ultimate verity for me, then my case is hopeless."

Jo Marr shook his grizzled head solemnly. "I can never reconcile myself to the mystery of it. It smacks of the black arts to me. We are near the Philosopher's Stone—the last secret of life—too near, it seems to me, for the good of the race. Du Lane predicted the dissolution of the human race when science solved the secret of mind disembodiment."

"You are always doting on Du Lane, father," Van chuckled. "You oldsters will never admit that Du Lane had no authority whatever in physical science. Imagine men leaving their bodies by choice for the insensate condition of pure thought! That is, excepting such unlucky monstrosities as I, with complements on star worlds."

Old Jo appeared to agree. His manner remained serenely cheerful as his son departed to continue his round of farewells among his intimates. . . .

Le and Van did not meet again that last week before the great experiment. They *telosed* frequently, however, and personal contacts were not necessary for arrangement of all details. Several times daily as the time grew short Van *telosed* Lydas on the world of Os. Vainly he sought some clear clue as to what he might expect if he actually reached the Antarian planet. But Lydas maintained her indefiniteness with gentle insistence, and he could not interpret the incidental pictures of the *telos*. He would

know all soon enough, the Osan entity reiterated. Nothing she could say as to his possible future on her world would ease his mind. On the contrary, she implied that in his earth-limited understanding and sense-prejudice, he might be repelled and discouraged. Before he could appreciate the future awaiting him on Os he must face the facts in the body of an Osan, his intelligence reacting through the senses evolved in Osan hyper-life.

To the day and the hour Le Hoyt kept his promise. There was no world-wide sensation—not even a local stir. The Telosological Institute had seen to that. Only a few eminent savants and intimate friends, all to be trusted to secrecy, were aware that the destiny of Earthman was in abeyance with the test to be conducted in the Hoyt laboratory.

A few minutes before the hour of the test, Van entered the laboratory quietly. Three elderly representatives from the Telosological Institute were awaiting him with Joe Marr, all reverently quiet.

Le Hoyt moved swiftly, silently, from adjustment to adjustment. The power unit already was in operation at low energy expulsion. The huge, transparent mutator-cone had taken on a violet tinge, its interior agitated by an incessant upward flow of bubbles like the effervescence of a gas in liquid. As he looked upon what might prove his cremation pyre, Van felt no fear. The stoic calm of the fatalist upheld him.

Le faced him at last. His instructions were impersonally simple. Only the occasional tightening of the heavy, saber-like lips revealed the strain of a great heart, putting its works to test with the life of a friend.

"You will remove your clothes and

lie down on the de-animating plate," Le gestured to a long, copper, coffin-like bed not far from the mutator cone. "It will be the last you will know or feel—before the success of the test is decided."

Van turned to the scientists, briefly pressed each hand. A moment longer he held his father's hand.

"The Mind of the Universe be with you, my son," Jo Marr murmured.

Then Van stripped quickly and lay back on the de-animating plate. Le stepped to a small dial at the head of the plate, turned it full around. The plate turned greenish yellow, then darkened to a livid, blotched maroon. Van's body relaxed, eyes closed. Then, with startling suddenness, his muscles stood out rigid as iron. Fingers and toes stiffened and trembled; the eyes opened, balls protruding; the lips drew back over the teeth in a hideous, death's-head grin.

Le was watching the regulating dial intently. When he finally reversed the rheostat knob, Van's body had the aspect of one turned to stone in the throes of an epileptic fit. Wheeling to the mutator cone, Le depressed a pneumatic force release. The tip of the cone tilted back, and simultaneously, with a low whir, mechanical arms stretched down from an overhead cable, sliding gently under the body, lifting it slowly toward the open cone.

Jo Marr's heavy breathing was the only sound as the robot arms slid the grotesque, stiffened body into the cone, where it rested upright on glowing, jewel-like anodes at the base. With a swift pressure of one nerveless hand, Le closed the vacuum-tight cone, then threw open the energy release of the huge atomic expulser.

The broiling, violet light in the cone leaped instantly to furious palpita-

tion. An unearthly holocaust of glare played silently over the upright body. A meteoric blaze of sparks like radium emanations danced and oscillated from the drawn skin. Around the head the glare was almost incandescent.

Le worked at the organ-like bank of drums now. In each of the great atomic filters was a small, crystal gauge, through which leaped a tiny, livid tongue of heatless flame. He watched alertly, expressionlessly; once his big hand flicked expertly to a delicate adjustment. Now and then he glanced at the cone.

Under the soundless, heatless blaze of the deatomizing circuits, Van's body had turned to an ember-red shell through which the bones loomed eerily dark. The horrible expression on the face had not changed, but all lineaments were growing dimmer, like the melting features of an effigy in wax.

Gradually the last faint outlines of the figure in the cone faded from view in a dazzling welter as of countless emery wheels grinding through tungsten steel. Le stepped to the energy release, swung it halfway back. The play of sparks receded to a throbbing pulsation of furnace red, that slowly paled to roseate pink and white Coils of milky vapor twisted through the interior of the cone Van's body had disappeared.

A pale, prismatic radiance at last, through which drifted the coils and flecks of milky mist—life-mist, quintessence of organic assembly. Then the last faint tint of prism hues faded, and only the white vapor circled the cone, like a live thing seeking freedom. The mist-shapes grew thinner. A watery, translucent glimmering hovered an instant in bare visibility,

and then the cone was empty—gray and dead as a cooling cremator plate.

Le shut off all power. His face was white as he turned to the four who looked on.

"Gentlemen," his voice broke out tense and harsh. "The process is complete. Jo Marr and I will now don helmets and await communication from the subject. If Van lives, and his will is strong, it should not be more than an hour before we know the best—or the worst."

Jo Marr swayed, tottered. One of the institute men caught him, eased the old man to a bench before a lab table. He dropped forward on his arms, shoulders racked with silent sobs.

Le Hoyt had his helmet, was fitting it over his skull with icy finger-tips. The eldest of the institute men touched his arm, spoke in a voice near breaking, "In the words of that celebrated ancient—'What hath God wrought,' Le Hoyt?"

But Le didn't seem to hear. He had sunk to the bench beside Jo Marr. His eyes were vacant in the *telos* concentration as the crest of his helmet pulsed with living light.

"Van! Van!" he murmured. "Death—or immortality If I have killed you, my friend!"

CHAPTER IV

FROM the instant the de-animating plate obliterated consciousness, Van Marr knew nothing until in a sudden, glimmering rush, as one breaking water after a deep exhausting dive, he knew that he was alive.

A strange sensation of etheric lightness, airy buoyancy, pervaded him. He could not see or feel with the sentience of flesh, with normal, limit-

ed perspective, yet he knew what was around him as a mind perceives the extremities of its organism:

His father sat bowed down over the laboratory table, head buried in his arms; Le Hoyt adjusted his helmet, going into the *telos* silence, calling, "Van! Van!" The mutator cone stood empty, gray, cold. The institute men were whispering, gesturing excitedly. Yet he hovered above, below, around them as a thing apart, without definite location. Perception preternaturally clear was all that manifested his existence.

Le Hoyt was calling. Van longed to speak to Le and his father, tell them he lived in a hyper-world, an invisible dimension—that all was well, the experiment a tremendous success. Yet he knew inexorably that Le Hoyt could never hear him. Le and Jo Marr, the institute men—all were inhibited by obscuring, fettering flesh. As well might ten thousand light years have separated him from these inferior entities.

Time meant nothing to him now. He knew, without effort of deduction, that he was beyond time—ageless, indestructible—free as thought alone is free in the hyper-dimension of pure consciousness. It might have been a second or a century that he perceived his existence in the silent laboratory of his release, and then the thought of Lydas, the purpose of his miraculous rebirth, spurred him galvanically.

Lydas! He was free to go now—to realize that decade-deferred tryst on the Antarian world of Os. An instant he willed, and in that instant the laboratory vanished

He was soaring effortlessly, fearlessly, into star-shot darkness. Great, flaying dust storms swept him. Clouds of meteors rocketed past in streaking, living fire. A white moon

flared and vanished. The sunlight winked out in a dead, colossal blackness. At a velocity incomputable he sped across a trackless, frigid void—yet he knew no distress, no anxiety.

Stars glared out like blazing torches in incessant, blinding panorama of which he was ever a constant, all-perceiving center. Centuries behind hung the tiny Terran sun and all its planets. And this was all as it should be. He had no dread of the future, no grief for the past, no terror of the furies of destruction that raged about him. The stunning fevers of emotion had cooled with the fusing of his flesh. He lived as mind alone, cold as the absolute zero of the black infinity through which he plunged by will alone—*was* will alone.

The white incandescence of a monster, gaseous sun enveloped him. The eerie pallor of a nebula glimmered briefly. Black abysses interminably recurring; dead worlds rising, fading; strange cities bathed in blue light rays; life wriggling from tepid slimes. Worlds of ice. Worlds of volcanic flame. Yet he knew no awe, no surprise, no marvel at his magical immunity to heat and chill. An unshakable serenity, a boundless faith in his illimitable powers possessed him. Mind could pass through fire safely; mind could instantly summon the remotest edges of the Universe. Lydas he had willed to meet, and to think was to realize his desire.

Lydas! Lydas! Lydas! The connotations of her name swelled to measureless proportions, permeating his insentient, formless, limitless being, until all else was secondary, a mere series of trivial phenomena.

Antares loomed turgid red out of the fleeting chimeras of star systems. Even the tiny green star near Scorpio's arachnid spine gleamed like a

monster, gravid moon as he neared the Mecca of his cosmic pilgrimage.

The giant red sun rolled up toward him, bulging out of the nadir like a desert sunset, veiled in drifting smoke. There were worlds before him, around him—innumerable, malformed worlds and moons and ashy asteroids, all drenched in crimson, bloody luminescence. He did not hesitate to choose. A great, hulking, discoid mass, dazzled by faucets of wine-gleam, plunged up at him as if tossed by a jinni's mighty hand.

IT was the world of Lydas, warmed by the flame rays of Antares!

In the inscrutable vision of the mind's all-seeing eye he perceived it, and then the darkness of stellar space was gone. He hovered in an alien, pungent atmosphere, above mountain ranges like banked, black thunderheads, scarred with strata of dull gold and gypsum white. A vast, foaming gulf of red-tinged liquid rolled in majestic, tidal waves against vermilion cliffs that towered to incredible heights.

Trees like red-wreathed marble monuments "stalked" the miles-long slopes of a valley that seemed to have no floor. Sea-green clusters hedged the boles of stupendous trees—trees like Eiffel Towers of raw glass. Endless, twisting lanes of diamond-like crystals wound through the Titan forests. The landscape of a Titan world where Terra might have rested in a lake bed! Yet he did not marvel. Somehow, it was all familiar, uncannily akin as the realization of a lost race-memory.

The great valley slanted up between the mountain ranges from the foaming, crimson sea. Unerringly he followed the mist-bathed trough of the valley. Musky odors steamed through

the smarting, heavy air—odors unknown on earth—odors originating in the air itself, from the alien constituents of it. That weltering, stinging gas was deadly poison to a Terran life-form. Yet he was not alarmed. Under the torrid eye of the red sun-star, the world of Lydas charmed him as a paradise lost and now regained.

Straight to the head of the crag-walled valley he sped, without question, without wonder that he knew the way. In a crescent shaped plaza, so wide from horn to horn that he could not have crossed it in an hour as an earth-bodied entity, they waited—the people of Os, of Lydas. Marble white was the floor of the vast proscenium, studded with angular, crystal columns, sustaining a roof of rock, so translucent it seemed to merge with the roseate sky.

He knew what they were like now in a deep, soul-gratifying satisfaction. They were floating above the great plaza. Incessantly changing, radiant forms of snowy vapor—life-vapor—a quintessence of sentience beyond all earthly concept of life. Swift as the chameleon imageries of thought, their forms altered—from luminous stars to spinning, involuted rings; from undulant veils, like angel shrouds, to perfect, prismatic spheres of gem-like rhomboids.

They could not know he had come. Not yet. One last duty remained to be performed before he returned from his oneness with the infra-atoms of the cosmos.

A huge urn stood on a golden dais at the center of the plaza. Around it swayed the legions of Os, the entities of life-vapor. Clear as crystal were the walls of the urn, which was sealed hermetically by some process unknown to men of earth—the process

by which time welds an agate from the bole of a tree.*

The mist-shapes wavered, circling the urn like a celestial host invoking deity. Tenuous arms reached out caressingly and vanished; beatific faces formed and faded. He perceived nuclei of sanguine light throbbing in the mist-shapes—blood-raying hearts of life's ephemera, fused in the ultimate cycle of its evolution.

Lydas awaited him at the urn. He knew her the moment he perceived her. Yet she was no different from the others in the evanescent phantasms of her lovely form.

WITH an intuition that was a sense in itself he knew what he must do. Within that crystal urn was a dead-white haze, like filtered smoke in a sealed bottle. The body of an Osan awaiting the resurrection of his will—the spark of life he had brought from faraway Terra!

Unaware of the adamant solids opposing him, he entered the urn. A bright light seemed to flash up all around him. Then he was swimming in a twilight sea of physical sentience, an embodied being radiant with sense delight. He moved. He experienced potency of all movement, magical powers. His vaporous flesh glowed golden with the ecstasy that flooded him. He was a stinging symbolist of life-essence, like those others, like Lydas, with the red-throbbing heart raying warm energy through him as a sun within a cloud.

He laughed, but his laughter was soundless. Effortlessly, by the mere wishing, he expanded. The crystal urn shattered to bits. He soared and

stretched, breathed deeply. Gigantic as a cloud, he poised over the remnants of the crystal urn where he had claimed his own.

He heard Lydas call as she floated to him in a rippling streamer of rose-flushed mist.

"Van! At last!"

Then, in the voices of the mind, that spoke within his re-embodied intelligence, a chorus of a thousand mist-shapes, the people of Os, hailed him, as they swayed and undulated about the twain at the shattered urn.

"Welcome, earthling! Welcome to the body of Trakor and the planet of Os—welcome to the life-light of Antares!"

"Mighty Osáns, I salute you!" Van answered in the soundless voice of the mind that was now natural to him.

"You have waited long for this reunion with an age-old harmony," called the Osans, circling airily. "We leave you alone with your happiness."

With one accord the white host scattered, flying like wind-driven beards of cloud, reflecting the crimson star-gleam of Antares.

"Lydas!" Van cried. "How strange—and how wonderful! How free I feel—how all sensing—"

"Dear Earth-One, now you know why I could not tell you how we looked," her thoughts filled his mind with a whispering symphony of connotations, inexpressibly delightful.

"Yes, I realize now—I had to be one of you before I could understand."

They floated nearer, the etheric edges of their bodies touching, merging.

"You came from the crippled entities of imprisoning, primitive being," Lydas was saying. "Billions of years ago we were somewhat like you earthlings. Gradually we lost the inhibitions of the lower forms, Life

* Petrified wood is a replacement of the material of the original grain and cellular structure of wood by silica. The replacement occurred in geologic eras. The structure of the wood was closely followed and beautiful agate was produced.

sprang from the vapors of the primal nebula, and as all is a circle, life in its highest development returns to the nebular form—the apparent vapor that you see as yourself in the body of Tragor, which we have preserved so long for you in the urn.”

“But, Lydas—” he was sad “you must know what we are on Terra—how we love.”

Her laughter suffused him with a guilty pleasure.

“Choose, then, my dear—choose to be. You may assume any form, any consistency that your fancy desires. We are formless, with the power of assuming all forms. The amoeba of protoplasm came first; the amoeba of light comes last—and we are amoebas of light.”

Before he could consider, in the instant his will made choice, he stood before the vapor form of Lydas in the form of Terran man, gigantic in size, yet not seeming huge to himself.

Van scarcely could credit the sudden accession of his Terran form. He looked down at himself. He was still the vaporous essence in consistency. There was no density to him. Lydas was laughing, her snowy whorls mottled with living gold.

“How ridiculous you look!” she taunted.

“Since you are not as I,” he answered, chidingly.

He had scarcely *telōsed* his disappointment when the wavering outlines of Lydas coalesced, and the form of Earth woman, ideally beautiful, floated before him.

“You are divine!” he marveled.

“No more than you,” Lydas’ eyes were clear azure, shining in a marble-hued, yet living, expressive face. “As long as you wish I shall retain this shape, but you will not wish it long I think—not with the potences of form

and sense that you now possess, my dear.”

“But we still speak in thought alone,” he protested. “We are still shapes of life-vapor, though we appear as man and woman.”

“Another wish implied, oh, child of a young world!” Lydas’ warm smile caressed him. “We choose to live in the greater freedom of vaporous dissociation of atoms. Low life-forms change shape only in centuries of evolution, but we Osans, at the top of the great cycle, have direct control of mind over matter. We change form and organization of form at will—even with the nuances of each whim we change, as you have seen.”

He willed that the Earth body in which his heritage of sense had been founded should return to him. Lydas willed with him indulgently. They shrank to comparatively diminutive size, as Van could see, for the crystal pillars of the plaza lunged upward out of sight.

He felt heavy now, his limbs stiff, unwieldy. He saw Lydas’ hair turn to spun gold, streaming silkenly in the wind about her perfect, white shoulders. Her skin was like Earth woman’s now, flushed with delicate pink.

AT last they stood together as man and woman on the floor of the plaza that now seemed rough and hilly. So far were they from the edges of the paved space that Van could hardly see the magnificent, red-branched forests of the Antarian world.

He took Lydas in his arms and kissed her. Lips warm and eager. Nothing of the mist-shape about her now. Her arms clung about his neck. She whispered, “The caresses of infants in the evolution of life, dear. But I rather like them.”

The sound of her voice, the movements of her lips, startled him. His own voice startled him, too, as he breathed, "Lydas, I love you!"

"Van!" she answered with all the passion a loved name can connote. "I know what you wish now. A garden for lovers like you Terrans conceive for your gods. All your past is clear to me now that you are here and that crude *telos* transmission of yours doesn't interfere."

"A garden!" he laughed. "Why, even your trees are mountains on Os. We'll have to sit on a leaf like a couple of pixies."

"Wait and see. Take my hand and *think*."

He took her hand. Without effort they soared together with a swiftness that would have sapped the breath of oxygen-breathing organisms. When they descended they walked through conical clumps of vivid green, like *arbor vitae* on earth. Strange white blooms nodded underfoot. Sprays of purple filaments exhaled an intoxicating redolence. Van could hear the restful ripple of swift water. Dove-gray, velvet-winged insects, mottled with black and gold, trilled like spring-inspired song birds. It was through the lichens, molds and mosses of the giant world that they strolled as tiny Terran forms. They had alighted miles from the plaza in their airy flight away from the altar of their joining.

Lydas bent and picked up a pink, hollow spicule of crystal. "This is a shell of life as it began on Os," she told him. "We are near the end of the cycle now. In Le Hoyt's mutator you were reduced to the ultimate dissociation of atoms, the very last stage of evolution, which is invisible, dynamic consciousness, of which the void of the Universe is composed."

"Then we are immortal," he inferred.

"No, because we do not wish to be. We die when we grow weary of all the infinite experiences of which we are capable. Tragor, whose body you have animated, was one who chose to die. He gladly offered his body to me for your reception."

He stopped and took her in his arms. "I can't believe we shall ever want to die," he whispered.

"Perhaps not for ages, Van. But you will tire of this form long before that. It limits us—denies us the pleasures that you have just begun to understand. It isn't natural for us to be chained by primitive ways. But we shall live as man and woman as long as you wish, for your happiness is mine. The form is novel, too, and I don't mind it."

"But, why, with all your infinite powers, could you not come to earth?" Van was mystified.

"Because we are limited after all, just as all life is limited and compensated. We could not live outside the atmosphere of Os, and intelligence would fuse to ash in a Terran body, just as our atmosphere would poison an oxygen-breathing creature. Our atmosphere is thousands of miles deep, containing gaseous elements which supply us with food and drink and every mineral necessity. We breathe and eat through every pore of our bodies. We are doing that now as we walk here together. And so we could never survive on Terra, and we have lost the mechanical senses which enabled Le Hoyt to dissociate your vibrations completely. In other words, dear, we are perfect for our world, and have sacrificed all chances to leave it in becoming so perfect in our environment."

"It is all incredible, and yet in the

body of your Osan I cannot help but believe. And you—you are with me in the form of Earth woman more lovely than an artist's dream."

"Poor, dear, limited earthling! Why is it that all lower forms of life believe themselves supreme in their tiny, limited world? How can they believe that all life must be like them to claim a higher form? Life is as variable as the winds. There's no yardstick to judge it. You Terrans with your five senses and the glimmering of a sixth have scoffed at the idea that life may evolve with twelve senses, or just one, as we have—a mind-sense more keen than any protoplasmic tropism."

"But we were able to mutate a mind entity. In that we were superior to you!" he exulted.

"Yes, it is compensation. For all your crippled, sluggish, germ-plagued organisms, you Terrans have the power of mechanical understanding to compensate. But you must see that the end of life is not in machines, but in the triumph of mind as master of itself—in the shell of mind perfectly adjusted to environment—in the hypersensitizing and endless insatiation of every pleasure."

But Van had for a moment forgotten that Lydas was speaking. Feebly

pip-ing, in the code of the *telos* wave, he detected a repeated message that startled him with recollections.

"Van! Van! Le calling Tell me you are alive. We are waiting."

Lydas smiled as she interpreted his concentration—his response to the call from Terra.

"I am here, Le. Lydas is with me. I am happier than Earth man ever dreamed of being."

"Great Universe be praised!" came Le Hoyt's *telos* across the abyss of space.

". . . . Van! Van, my son! You are alive—happy?"

"Yes, father—alive as Earth man has seldom dreamed of being alive. I shall always be waiting for your call—always be ready to answer, for the mind wave is my natural means of communication. Televize the world that I have called from Os of Antares, where the last and greatest of the life ephemera exists. I salute my brothers of earth from the apex of a billion years of evolution!"

As the *telos* to Terra ended Lydas lifted her lips to his. Presently, they walked on through the arborescent mosses of Os, in a silence too sacred to break with the dissonance of earthly speech.

THE END



In the Realm of Books

By C. A. BRANDT

NOONMARK. Poems. By Julia Boynton Green. 69 pages. \$1.50. L. E. Mitchell, The Valley Press, Redlands, California, Publisher.

This is a very attractive little book of poems. Miss Green has the art of getting not only melody and true verse, or prosody, into what she writes, but there is real thought and substance in all she gives us. Each of the five sections of the book is prefaced by short quotations from various sources, intimating what is to be expected in the coming pages. The reader will not be disappointed in his expectations. The poem entitled "The Night Express" will reach the heart of our mechanically disposed readers, while the marital relations of Thomas Carlyle and Jane and of Socrates and Xantippe, are sad moral lessons—but the poems are good. Our poetess is a mistress of rhyme. Her book shows this in the sonnets, written naturally yet with the true order of rhymes, so difficult to carry out in English without impairing the flow of the composition. The poem alluded to above "The Night Express" (we have published several other poems by this author), illustrates her mastery of the sonnet.

THE PAGEANT OF MAN. By Stanton A. Coblenz. 319 pages. Price \$2.50. The Wings Press, New York, 1936.

Mr. Coblenz is well known to our readers as the author of a number of stories, which have appeared on our pages. He is more than a writer of fiction in prose and in this book he makes his appearance, by no means his first one, as a poet, a rôle in which he is not so familiar to our readers. The book is a long poem in which the author opens with a protest against the iniquities of the world, and they are enough to excite the indignation and sorrow of the properly thinking man. War is bad enough, and the determination of almost abstract matters by wholesale slaughter is concentrated misery or stupidity, but the long drawn out inflictions of personal ambitions in governments is almost as bad as war, and lasts longer, for there is so little chance of arresting its evil course. The poem starts with a full recognition of the evils with which the world has been afflicted and follows them to its conclusion, the state of things in warlike Europe

and in peaceful America gives ample ground for philosophising about matters on this side of the ocean. The poem is not in *vers libre* but throughout is in iambic meter, the majority of longer verses being sometimes broken into by shorter ones, making a most interesting body of true versification. The poet seems to uphold the very natural belief that this world we live in is inclined to go wrong in peace as well as in going to war. If Ethiopia and Spain give the world examples of the stupidity of war, the Western Hemisphere, with its needless restrictions on the freedom of the individual and the desire evinced to have the government do the thinking for the people, give a sad example of the capacity for the evolution of interference with the individual in peace time. It is with pleasure that we warmly commend the book, and recommend it to our readers.

DARZEE, GIRL OF INDIA, By Edison Marshall. 280 pages, \$2.00, H. C. Kinsey Co. Inc., 105 West 40th St., New York.

A young American engineer, Henry (Hank) Watson who came to India to recoup the family fortune, but was unsuccessful, and who is about to return to the land of his birth, is suddenly thrust into a series of highly fantastical adventures. It seems that he is an exact "double" for one Drummond, a mysterious, international Spy and an A-1 trouble-maker. While the hero is dining peacefully at a night club, he is arrested as Drummond. Proving his real identity, he is enticed by promises of very large cash rewards to enter the services of the C.I.D. to figure as Drummond at a meeting of Tibetan and Chinese Envoys, and where the fate of British Rule in East India is at stake. The Tibetans are to be duped by Drummond, who will show them a forged copy of the last will of the Dalai Lama written on a Bo Tree Leaf. A very large cash reward is Hank's if he succeeds in recovering the original testament, which is also in Drummond's possession.

Hank's arrest took place in a night club, where he met Darzee, supposed to be a Naga dancing girl, but Darzee in reality is an English girl, who together with her father were dismissed in disgrace from the British Secret Service, when the original Bo Tree Leaf Testament was stolen by Drummond.

Hank is thoroughly trained for his difficult rôle by native members of the C.I.D., and departs on his mission. *En route*, Darzee joins Hank's caravan and she and Hank become fast friends and fall in love. Everything goes as *per* schedule: Drummond is captured, Hank very successfully taking his place, influencing the Tibetan Envoys not to abandon England's Protectorate of Tibet. Drummond is turned over to the British Authorities, Hank cashes in, and Darzee and her father are re-instated in the good graces of the British Raj.

Though the book contains plenty of action, well sustained until the very end, it is not quite on a par with Mr. Marshall's many other books, but it makes good reading just the same. Anyhow I liked it.

THE SHADOW OVER INNSMOUTH. By H. P. Lovecraft 158 pages (price not mentioned), The Visionary Publishing Co., Everett, Pa.

Lovecraft, well known to all Science Fiction readers, again shows himself to be a master at word-painting. In this book he sets out to create an atmosphere of horror and mystery and succeeds admirably. It seems that the ancient seaport of Innsmouth in Massachusetts was the subject of secret Federal investigation during 1927 and 1928. A strangely large number of arrests was rumored about, but nothing was ever made public. The only industry, outside of fishing, which ever flourished in Innsmouth was a gold refinery which sold gold bullion in large quantities to the Government. There were some rumors that Captain Marsh obtained his gold from an unknown island in the South Pacific—there were other rumors that the gold was delivered to him by Sea Demons, a sub-human race dwelling in the Ocean, for the privilege of mating with willing Humans. The fact seems to have been established that Captain Marsh himself as well as the immediate members of his family; and as many of his employees and retainers had likewise mated with the Fish-people, and had actually started a new and horrible race of beings, said to become immortal, as soon as they joined their sub-sea relations. The hero of the story, who belongs to the Marsh tribe, determines to get to the bottom of all these rumors, and after a lot of difficulties, lands in Innsmouth, where he encounters the queerest looking people imaginable. He finds out that he is a direct descendant of Captain Marsh, and that the tainted blood runs in his veins also. He discovers that he is developing the "Inns-

mouth" look, and already detects subtle fish-like changes in his appearance. Horror stricken he plans self-destruction, but a dream, in which he sees his great grandmother, one of the ageless sub-sea dwellers, makes him decide to join them in the near future.

A fine yarn for those who like their horror in large chunks.

CRISIS 1992. By Benson Herbert. 286 pages, 5 shillings 6 pence. The Richards Press Ltd., 10 Paternoster Square, London E.C.4 England.

The book is graced with an enthusiastic preface by M. P. Shiel, praising it up to and above the sky, but I do not share his views. Crisis 1992 is neither plausible, nor is it constructed on a sound scientific basis. It leaves practically everything to the reader's gullibility.

This is the general Idea: In 1992 the Earth is approached very closely by a large heavenly body. However this intruder neither affects the Moon nor any other part of the Solar System. The scientists of that day decide to visit the intruder, which they have named Arion, and with a space-ship, the construction of which remains a secret with the author, they reach their destination. They find very peculiar conditions existing on Arion—queer light effects—queer sudden tilts and changes in the landscape, etc., etc., none of which are explained. To make the reader still more confused the author introduces what he calls "Doppel-laemchen" (Doublelambs) very improbable eight-footed two-headed creatures, which rush at high speed all over the place, but are totally inoffensive. Then we meet the Intelligences peopling the Arion: trees, with powers of locomotion and sign language *à la semaphore*, and powers of telepathy, all of which is rather silly.

They discover that the Tree Things are using the Arion as a Space Ship, that the interior is hollowed out, to provide housing for them and their machines, etc. All this is only hinted at by the author, but never admitted. In the meantime the Arion has moved away from the Earth, and our explorers are in despair how to get back, since their machine has been wrecked beyond repair, but (now *waddyethinkofthat*) the Tree Things very obligingly produce a brand new Space Ship overnight of their own design and the Explorers land again on Earth.

At best, an exceedingly poor amateurish attempt at a science fiction story. Not worth reading.



DISCUSSIONS

In this department we shall discuss every month topics of interest to readers. The editors invite correspondence on all subjects directly or indirectly related to the stories appearing in this magazine.

The Divining Rod Again Comes to Light. One Thing it Seems to Divine Is How to Get People's Money

Editor, AMAZING STORIES:

I remain unconvinced of the fraudulence, either deliberate or unconscious, of water divining. The evidence in favor of its authenticity is altogether too good. From the mass of favorable evidence here are a few points, of which Nos. 2 and 3 dispose of your contention that there is no scientific evidence of the phenomenon.

(1) The diviner holds a "V"-shaped stick in clenched fists, the apex held out horizontally before him. His wrists are tightly held by two men, one on either side. When he passes over running water the apex of the stick twists downward to such an extent that each arm of the "V" snaps off, close to (but not inside) the hands of the operator. Now, Mr. Editor, if you think there's trickery, will you kindly explain by just what conceivable form of contortionism that can happen—and happen it did when a well-known diviner, Childs of Ipswich, was tested by two men who were skeptical of his powers?

(2) In a series of tests carried out by the late Dr. Geley of Paris the percentage of successes in water finding was over 80.

(3) The authenticity of the phenomenon is admitted even by "Nature," the world's leading scientific journal.

(4) Major Pogson, at one time official diviner to the Government of Bombay, succeeded time after time in finding water under seemingly arid Indian plains, after geologists and other experts had failed.

(5) Professional diviners in this country and elsewhere undertake to find water on terms of "No water, no pay." This is hardly a profitable field for a trickster.

Enough of this, however. Let's to the April issue, which was really good. "Twin Worlds" was an up-to-the-average Professor Jameson story, although personally I consider this series just a little childish in style. "The Chemical Murder" was Messrs. Binder at their best, and the star story was, of course, "Shifting Seas." The way you sprang that story upon your unsuspecting readers is typical of you. It should have been

ballyhooed for months. Is it possible that you have other stories by Stanley G. buried in your files? If so, dig 'em up at once.

I'll conclude by saying that I find *AMAZING STORIES* a pleasant change from wildly theoretical science fiction and that, although I'm usually reasonably satisfied, I would be even enthusiastic if you could keep up the standard of the April issue.

C. R. FOSTER,

Close House, Bardonia Mill,
Northumberland, England.

(The so-called divining-rod really divines nothing except the credulity of mankind. If you will try it yourself, providing you hold it properly, you will find that an imperceptible motion of the hands or fingers will make it turn down so as to puzzle some observers. It often seems that mankind likes to be deceived. We do not practice "ballyhooing." Sometimes we have to stand up for a story which is criticized, as we think, improperly. We shall try to keep up our standard in accord with your remark.—EDITOR.)

Quite a Long Letter From an Admirer or at Least an Appreciator of Morey's Work

Editor, AMAZING STORIES:

I'm going to take up the subject of illustrations this time. Recently there have been several letters printed which complain of Morey's inside illustrations, and practically all of these praise his covers; which, it seems, tends to prove that the fault lies some place other than on his ability. We, you and I, know that Morey is capable of turning out very good work. This has been evidenced over a period of several years. Why, then, are his interior drawings almost unanimously declared poor? On this question I have arrived at the following conclusions, based on the June, 1936, to April, 1937, issues inclusively.

In the June issue his drawing for "The Sword of Akalah," was generally thought to be excellent, primarily, I believe, because of the detail involved. This one was called better than usual due to the fact that in many of his illustrations it seems that he has hurried over them so much as to turn out

a sloppy job. But is that true? I believe it is in *some* instances, but not in as many as is generally conceded. The real fault, in my opinion, lies in the type of paper and ink used. For one thing, the paper is rather drab and doesn't seem to lend itself to producing good pictures. And about the ink For some reason, it is never very dark, but rather a sort of dull gray. This is the same in all of his drawings. In some cases, a dark reproduction would add to the illustration considerably. If this is true, then why is it that the drawing in question was good when it too was somewhat drab? Because it was the type that looks better when not too dark. I don't believe there was more details in it than in the majority of drawings, but the type of detail in it was the kind that demands soft coloring which was present because of that drab quality.

Now there are many other drawings in these six issues with just as much detail in them as was in the one for "The Sword of Akalah." But usually, it is detail in machinery, buildings and similar things. These drawings are composed of sharp lines which would be accentuated more if they were blacker. And that type is much more predominate than is the other wherein the lines should not be so sharp. How does a drawing of a space-ship in the void show up if the lines are indistinct and space itself rendered grayish like a cloudy day on Earth? Not so good, as may readily be seen. I will cite no examples as this type is rather prevalent and may be found in almost every issue.

As a rule I like Mr. Morey's work. I consider his covers from the August '36 issue to date as very good. He doesn't have to use very flashy colors to make them outstanding, which is a good quality.

This is probably quite a lot to write solely about illustrations, but I tried to show that all the blame your drawings are getting is not altogether the fault of the artist. The following points I have tried to put over: That Morey is a good artist; that the general run of his drawings demand accentuation by *contrast*, which may be accomplished by using a better grade of paper and darker ink; that detail is necessary to the science fiction drawing, and no matter how much is present in the original, it won't show up in a poor reproduction. For these reasons, I don't believe that switching to another artist will be of any practical purpose. Morey has as much conception of the real science fiction as has about anyone who is drawing at present; though we would appreciate it if Frank R. Paul could be persuaded to again illustrate science fiction.

I believe I have created a precedent by

not mentioning the large size in this letter, but you know that I still *much* prefer it to the present format, so it will be all right to refrain from mentioning it.

Roy A. SQUIRES,
1745 Kenneth Road,
Glendale, California.

(You are evidently fair-minded, and desire to do justice to the work of Morey. The paper of the magazine is admirable for reading as it saves the eyes. It is a little trying as far as pictures are concerned. The ink is very good; the writer of these lines appreciates good ink as much as anyone does. We thank you for your line of criticism. Morey will read it with interest we may be sure.—EDITOR.)

A Most Agreeable Letter From New Zealand. The separation of something like 180° of Longitude Does Not Interfere with Friendship.

Editor, AMAZING STORIES:

I am fifteen and I am an admirer of all science fiction, really of anything to do with science. When I first saw your magazine I read "Into the Hydrosphere" by Neil Jones. I found I got a real thrill out of reading this magazine, so I passed the word on to some of my schoolmates, who thoroughly enjoyed it. I have a special bookrack for the "A. S.", and never tire of reading it over again. If anyone could let me have "The Planet of the Double Sun" and (or) "Return of the Tripods," both by Neil Jones, I would be pleased to pay the required price. If any old readers could summon "The Jameson Satellites" from the depths of their bookshelves I would be very pleased if I could purchase it from them. Just send price to above address and money-order will be remitted.

C. KIRKWOOD,
198 Remuera Road,
Remuera, S.E.2,
Auckland, New Zealand.

Back Numbers of AMAZING STORIES For Sale

Editor, AMAZING STORIES:

Nearly every month I read in "Discussions" of some reader or other wanting back numbers of AMAZING STORIES, so I have written in to say that I have the issues from April, 1934, to August, 1935, with the exception of the August, 1934, issue. I would sell these at 15c each, post-free, for seven issues or more.

Keep up the good work. It was a big disappointment for me last year to see you go

on the bi-monthly system. However, I suppose it couldn't have been helped.

SAM G. SIMMONDS,
35 Kilbarry Road,
Toronto, Can.

A Letter Addressed to Authors As Well As to Readers

Editor, AMAZING STORIES:

Having a few spare moments on my hands, I have decided to burden you with some of my personal views on science-fiction in general. No doubt you will be relieved when you discover that I have not put as much criticism into this letter as is my custom.

I wish to discuss a question often broached by s-f fans. Namely, which era produced the better material; that of 1926 to '32 or the period from 1932 to the present date?

This has been argued back and forth for several years and many interesting points have been brought to light. In fact, I believe that in my collection of science-fictional letters I have enough material on the question to form a good sized book. Because so many of these arguments are generally known, I will refrain from rehashing them; though I may, at some time in the future form them into a complete work and send it in to you. I doubt if this would serve any good purpose but it might be interesting as a résumé of the opinions of many fans.

You may already know that I, personally, am of the belief that the earlier years of scientification were its best. Many of the older readers think the same, but off-hand they can't explain why it is. It is when we dig in and try to uncover the real facts that we make some interesting discoveries. Here is one that may have some bearing on the case, but the real truth probably lies in many, not one, observation.

This example has to do with space-travel, one of the stock themes used by authors during both periods. In the old days, when the hero went gallivanting around between planets, he was usually the first man to do so, and consequently the principle by which his craft operated was explained as fully as possible. He invented it; we were carried along with him as he made discoveries leading up to his invention. All of the obstacles to be overcome were explained, as were the methods of meeting these difficulties. Things such as these were gone into thoroughly and it seemed to us, as readers, that we were the main character; that *we* were making these discoveries; that it was not the character of fiction who first trod the soil of other planets, but that it was *you* and *I* who did so.

How does this compare with the narra-

tives of today? In practically every story on these lines (all, to my knowledge, but I don't want to leave myself open to criticism) space travel has been established for years. We are made to feel that it is an everyday affair to leave the Earth; to be on other planets—which planets are not frontiers at all, but rather are so developed as to be, in many ways, similar to our own Earth. After reading five or six stories like that, it is no thrill at all to read more. They are all the same; very little variety, and it resolves itself into ordinary fiction in which all occurrences are in no way unusual and are happening every day. They are anything but AMAZING STORIES.

Do you see my point? I hope that I have made myself clear. That science fiction has "grown up" to the place where there is nothing new, seems to be the conclusion. Space-travel has developed along with the magazines which popularized it.

Now Editor Sloane, as a special favor to me, will you encourage some one of your best authors to compose a story around space-travel in which at the start no one knows any more on the subject than do we today? I, for one, want to recapture that feeling that there are new fields to conquer; that I am an eye-witness to the development of a space ship from the original idea in the inventor's mind.

Now I hope that I have not bored you, Doctor. It has given me a little pleasure to write this, and I hope that it has suggested to you a way of appeasing those fans who are consistently making known their desire for the return to the "good old days." Until such time as I again wish to discourse at length on some such topic, I remain,

ROY A. SQUIRES, II
Member SFAA,
1745 Kenneth Road,
Glendale, Calif.

(You have not bored but you have interested us—quite the opposite of boring. Your well thought-out letter will be read by many writers as well as readers and we hope that it will be taken in at its real value. New fields to conquer are desired by our correspondents and we think that such a field surrounds our sphere. But space-travelling is far off.—EDITOR.)

A Letter From an English Correspondent, Who Seems to Like Us, But Hides His Feelings

Editor, AMAZING STORIES:

There is no doubt about it, that no matter how critics abuse you—and Lord knows, I do—they always think enough of AMAZING STORIES to write another letter. Sure you've

got your own faults—we all know—but even though yours don't seem much more glaring than last time I wrote, I know very well that one has to make friendships not because of the other fellow's virtues but in spite of his vices. Consequently seeing that it is at least six months since I last sent you a letter to censor, I make no apologies for bringing once again my light from under the bushel. Later on in this letter, I would like to discuss a little problem of physics as well, but first following the immemorial custom of these columns, I had better say something about the magazine. Just lately the covers have been improving beyond recognition. That for October, depicting the space-ship in "Uncertainty" was admittedly rather a wishy-washy episode in the piece, but it was fully compensated for by the clean-cut vividness of the ship Control Room on the December front. As for the February cover I cannot be too enthusiastic over those love-sick ants prowling around the sea-shore, or "what-have-you." That one, despite a faint tendency on Morey's part to paint a vivid red sky that brings back memories of other times and places, is the second cover in six months that could quite comfortably be framed. While on that subject, I have no idea what Morey does with the originals of his illustrations, although I could tell what could be done. Yet I and many others would welcome the chance of buying them, if you started selling them as another magazine once did. Why not put such a proposition to the readers? The stories lately have, I am afraid, been none too inspiring nor inspired, yet for the sake of the good ones, I'll excuse the rest. (Yes, it is very generous of me, I admit). One of the worst stories lately broke one of the two rules of science-fiction, namely that such a story should not only be well written, but plausible, while of course, it is empirically possible, as Hamilton would have us believe, that man's history has been one not of evolution but of devolution—since no one can say without fear of contradiction that a thing is impossible, nevertheless, to affirm such a thing is to deny the evidence of archaeology, zoology, palaeontology and a great many more "ologies," much more formidable than ever came out of a college professor's nightmare. It is just against all reason. And as for that atavistic twaddle about man being even more degenerate than the apes, Hamilton should know better than to even believe it. Did some one just say that such a statement may be true, seeing what weak bodies we have? If so, remember that their cause is not Nature, but our artificial mode of life. Still let it pass. I would like just now to send out a gen-

eral distress call to J. W. Campbell, Jr. Mr. Campbell: in "Uncertainty" (part 2, page 33 of the December issue) you say that "if you could take a beam of pure monochromatic light and divide it exactly in half, and then recombine it in perfect interference, you would have annihilation of energy; cancellation to extinction. I wish you would elaborate this idea of annihilating energy. A friend of mine drew my attention to it and it has got us both beaten. I always thought energy could not be destroyed but only changed from one form to another. Again suppose for the sake of argument one has a monochromatic beam of light. Therefore, by definition, it will consist of a wave motion of one single fixed frequency. Do you intend by "recombining in perfect interference" that the wave should be cancelled out by heterodyning it with its own frequency (or by heterodyning its two halves)? Surely any superhet. radio does something like that when two R.F. frequencies are combined to give one A.F. signal that is equal in frequency to the difference between them. Yet I haven't seen the slightest Sign of energy being even partially annihilated. Of course the frequencies are not monochromatic. Still I would like a reply from Mr. Campbell or from anyone else who is interested.

SYDNEY L. BIRCHBY,
38 Nightingale Avenue,
Highams Park, Essex, England.

(At the request of the Editor of AMAZING STORIES, Mr. Campbell has written the following notes referring to your query at the close of your letter.

Mr. Birchby is quite right in saying that energy cannot be destroyed, but only converted from one form to another. That fact was the "absurdum" to which I was "reductio"ing, so to speak. The argument was: perfect interference of perfectly monochromatic light would completely cancel, and destroy the energy of the light. But energy cannot be destroyed. Therefore, perfect interference of perfectly monochromatic light is impossible.

To attain this result, as explained in the story, it would require that all photons of the light involved were identical, and this is an impossible thing, by Heisenberg's Uncertainty principle.

A partial, and apparent destruction of energy by heterodyning light waves is possible, but it is only apparent. If a nearly monochromatic light (the light from a sodium flame serves nicely) is thrown into interference, alternate bands of bright and dark light appear. The light-energy, that would have appeared at the dark spots, is not destroyed, but is cancelled by the op-

posite wave-phase of the interfering light. However, the bright bands represent the summation of the waves, and the average energy over both dark and bright bands would be found to equal that present were there no interference.

Heterodyning is this same type of phenomenon. The radio illustration you mention serves to show that the audio frequencies reproduced correspond to the bright and dark bands of the light illustration. Two perfect radio waves would cancel to extinction, if no audio frequency were impressed, just as two light waves of monochromatic type would. Both, however, are equally impossible, theoretically as well as practically. As you say, the superheterodyne type radio makes audible the impressed audio wave by taking the difference in frequency between the received wave and the locally generated wave; the fact that there is a difference of frequency makes the action possible, and, simultaneously, makes them other than "monochromatic" radio waves.

JOHN W. CAMPBELL, JR.

The interference of two sets of waves identical in all respects may operate to cancel their effect.—EDITOR.)

A Charming Letter From an English Girl.

Editor, AMAZING STORIES:

Just a few lines to tell you how much I like AMAZING STORIES. I think they are very interesting, I have just finished reading "Pets of Mars" in the October issue. My brother reads them too and we both discuss which stories we like best. Will you please print my name, age and address? Asking for pen-pals. I am seventeen.

MISS IRENE MOORES,
4 Elm Street,
Droylsden,
near Manchester, England.

(Your letter will we are sure secure you some "pen-pals." It is an editor's pleasure to feel that his work is not lost but is pleasing his readers. In your case there is a very pleasant side to it, for your letter is unusually well put as they say.—EDITOR.)

Comments and Praise (generally) Combined

Editor, AMAZING STORIES:

I have been a newsstand reader of this magazine ever since it first came out, and this is the first time that I have felt affluent enough to subscribe to it.

First, I think that it is far more entertaining than the trash through which I generally

have to hunt, when I am looking for a copy on the newsstand. It is also far more instructive. This type of story arouses an interest in the various branches of science, and stimulates the readers to go more deeply into the study of science.

Second, I like all the stories which appear in the magazine, but some much more than others. I judge the merit of stories by the number of times which I re-read them. Stories by John W. Campbell, Jr., rate the very highest on that scale, as I go back to them again and again and always find something new to think about in them.

Third, the illustrators; I think they are doing their best, but I don't like the results. Why can't you get Mr. Paul? He is the *only* artist of whose pictures I can truthfully say that I sometimes meet people on the street who remind me of his characters. Also his drawing of machines were far more understandable than that of other artists.

In the December issue I rate the stories as follows: "Uncertainty"—6 readings so far! "Time Control"—4 readings, "When the Earth Stood Still"—4 readings, "Space Marines and the Slavers"—4 readings, "Devolution"—2 readings, "Death Creeps the Moon"—2 readings.

The editorials are extremely good, and I hope that Dr. T. O'Connor Sloane will write us many more as good, or preferably, better.

WILLIAM D. JOHNSON,
42 Liberty Avenue,
Somerville, Mass.

(Thanks for your appreciative letter. No one in this world of ours ever does as well as he ought to.—EDITOR.)

Favorable Comment on Ant Stories by Bob Olsen

Editor, AMAZING STORIES:

I am writing this to tell you how much I enjoy the "Ant Stories" by Bob Olsen. I like them because they are entertaining as well as educational.

DAISY C. KAUFMAN,
10436 Kinnard Avenue,
West Los Angeles, Calif.

A Correction About the Book, "The Man Who Could Work Miracles"

Editor, AMAZING STORIES:

This is the first time I have written to you. I have been reading your books on Science Fiction for just 10 years now. You made one mistake in December issue, you said that the book, "The Man Who Could Work Miracles" is quite amusing but I

doubt if it will ever be seen on the screen." It is on the screen; I worked in the picture.

It was made down at "The London Films Ltd," Worton Hall, Iselworth. It has been made about six months over here, and had a good box office draw. I was in it myself for about six weeks.

Another word about your book, try not to have the stories too long. One last word, you have a most, or the most wonderful book of its kind on the market. Here is wishing it every bit of luck in the world.

I would very much like to hear from readers from overseas, any age, any color,

VIC FILMER, JUN.,
94a Stapleton Road,
Tooting Bec, S.W.17,
(Str) 8 8 5 7,
London, England.

(Thanks for your appreciation and correction.—EDITOR.)

A Very Friendly Letter From Australia. Our Antipodean Readers Seem Always to Like Us

Editor, AMAZING STORIES:

In reading through the "Discussions" of the February issue which arrived yesterday I came across a letter written by * * * * * G. R. Griffin (you may exclude the invective if so inclined). He has the effrontery to say that we get no s-f here. From what irresponsible source he obtained that statement I can't imagine. To my certain knowledge there are three different s-f mags. published here, namely, Amazing, Wonder and Astounding Stories; and I have read many copies of each. Anyone of these may be obtained at newsstands and news agents. After much haphazard buying of disjointed copies I finally decided to subscribe to Amazing. Let my choice speak for itself. Having got that off my chest I can return to normal. I am far too impatient and keen on s-f to wait for further installments of "By Jove!" so have read the first, and find it very promising. Of course, it is only the groundwork for what is to come, so I am living in anticipation of the rest. The conclusion of "Uncertainty" was marvelous, and several of my friends, who also read it, feel the same about it. There's no doubt about J. W. C., he's a corker! Another story in the Feb. issue which I enjoyed was "Prometheus." Arthur Barnes is a new author I presume; if he can keep that standard up he'll do. As for the cover, I could write reams about it. Morey must feel proud of it. Although a fairly simple layout, he has given just the expression to the eyes of the Graks that Dr. Rose described, while the sky and surround-

ings are treated in a truly wonderful way, to give quite an unusual touch to the whole thing.

In conclusion I must say that the stories promised during 1937 seem to be A+. I always enjoy stories about 21MM392 and the other Machine Men of Zor. I hope the story concerns Sirius as was intimated in the last words of "Labyrinth."

VAL K. LESLIE,
% Mrs. Greene,
Gordon,
Victoria, Australia.

(We always get nice letters from Australia. In this letter we have cut out some rather unfriendly epithets applied to a critical correspondent in "Discussions." We do not want to be hard on anyone even if they are hard on us. We appreciate your pleasant letter.—EDITOR.)

Back Numbers of Magazines For Sale

Editor, AMAZING STORIES:

To get down to brass tacks, I have some back issues of AMAZING STORIES and other science-fiction magazines to sell. I would appreciate your help.

AMAZING STORIES: Sept. '30, no cover; May and November '32; Winter '33 quarterly. And in a complete group with covers and in good condition, February '33 to October '34. Twenty issues as the Aug. was combined with Sept. in '33.

Including a few unlisted copies, I have over 70 issues of A.S. and other magazines and the two quarterlies which I will send anywhere in the U.S., postpaid for \$12, or best offer.

And just a last comment on good old AMAZING STORIES. Very often it lacks the wild adventure stories of other magazines, but for good, well written stories, it holds a decided edge over all competitors, past and present.

EDWARD G. MANNING,
18 Thorndale Ave.,
Buffalo, N. Y.

An Exile in the Athens of the North, Writes an Interesting Letter. We Hope You Like the Climate Better Than Robert Louis Stevenson Did

Editor, AMAZING STORIES:

Rightly (or perhaps wrongly) I consider myself an artist and I should like to make a few criticisms of Morey's illustrations and the magazine in general.

Why is it Morey's figures are so wooden and similar? His pictures are filled with weird tanks and instruments of irritating

monotony, while those lacking in machinery are also lacking in detail, so as to be almost unrecognizable? In his favor, however, are his cover illustrations, which having a more varied and interesting background, outclass the works of a rival artist who has a peculiar devotion to red and yellow skies, etc. Morey's color scheme is much more refined which gives the magazine a more dignified appearance when compared with other S.F. magazines.

Now a few (?) words about the magazine itself. I'll start with some brickbats. First, why do you call yourselves a Science Fiction magazine when about one third of your magazine is really that? Are your authors so lacking in imagination? Give us more impossible, thrilling stories. Of course there are some people who cannot read a story without having to pick it to pieces and find a logical reason for everything; for myself I'm content to accept your stories as you print them—the more imaginative the better. (Besides, exercising the imagination is good for your authors.) The overgrown bugs in "Lurking Death" are not an impossibility, merely an improbability.

Next, why print so many adverts? I'll allow you this much, your adverts are of a better standard than many S.F. mags on the market, but personally, I resent being asked, "do my ears waggle, do my kidneys float? When you suffer from inferiority complex try so and so's cure."

About the edges of your mag. Leave them alone. There's surely no need to have a surface good enough to take print along the sides of the mag. You aren't so broke for paper, I guess.

But enough of the grouching! I really only wanted to tell you why I like A.S. best of all S.F. magazines! Your magazine forms a link between my native country and myself (I am American by birth.) And life doesn't seem quite so lonesome for yours truly (poor exile!) when I have the companionship of AMAZING STORIES. Another reason is because there is no magazine of its type or quality produced in England (I do not know if English authors are able to use what little imagination they have got.)

An English boy wrote in your Feb. discussions complaining of having to pay 1/3 for this mag. I wonder if he realizes that 1/3 is the English equivalent of 25c, therefore he was obtaining his copy without even having to pay for the cost of sending it across the Atlantic! (As it is so difficult to obtain current copies of this magazine in England would anyone interested enough to criticize this letter please write me direct?)

I should like to correspond with American

boys and girls between the ages of 15 and 17 interested in S.F., all modern subjects (including dancing, music, automobiles, etc.) and wishing to correspond with a fellow-countryman in a foreign country, please write me.

JAMES BRANTON GOODAL,
24 St. Vincent Street,
Edinburg, Scotland.

(A cursory glance at the advertisements in our columns does not disclose to us the degree of awfulness you attribute to them. That is if you refer to advertisements as "adverts." We are glad you do not call them "perverts." With regard to your remark about English authors and science fiction, have you read H. G. Wells? We published a number of his science fiction stories in our early issues. Have you tried our English agent as a supplier of A. S.? His address is printed on our Contents Page.—EDITOR.)

Early Issues of AMAZING STORIES For Sale Editor, AMAZING STORIES:

I would appreciate it very much if you would publish this letter in your Discussions Department.

In reading the letters in the Discussions columns, I notice that many readers are anxious to obtain back issues of AMAZING STORIES.

I have available *Amazing* back issues of the 1928-1932 period, containing such well-known masterpieces as Dr. Edward E. Smith's famous classics "Skylark of Space," "Skylark Three" and "Spacehounds of IPC" and many others.

These magazines are all in perfect condition, the older ones especially being very rare. Interested parties are invited to write to the undersigned for further details.

ALLAN P. STERN,
2995 Lincoln Boulevard,
Cleveland Heights, Ohio.

An Encouraging Letter From California Editor, AMAZING STORIES:—

Permit me to congratulate you upon publication of one of the finest science fiction short stories I have ever read—"Prometheus," by Arthur K. Barnes. It seemed to me that Mr. Barnes' smooth writing incorporated more genuine characterization (every one of his characters is a living person to the reader) and action and emotional suspense than any three stories you have printed for some time. I'm not ashamed to say I got a thrill out of "Prometheus." That closing sentence had

the greatest dramatic punch I've ever ran across in science fiction. Can't we have more?

I don't mean to imply by this panegyric upon the excellence of Mr. Barnes that I ignored the remainder of the magazine. I read it through and found it of a slightly higher quality than usual, I think. Although I was not attracted especially by the stories of either Coblenz or Nathanson, I thought both the serial and Mr. Edwards' novelette were well plotted and well written. Dr. Sloane's editorial as usual was an outstanding feature; I always look forward to them.

This is my first letter to Discussions, and I'd sort of like to see it in print if space permits. I'm not, however, accustomed to writing letters to editors; it was simply the unusual story, "Prometheus," that dragged the above out of my reluctant typewriter.

Thank you for making my holiday season a little richer by reason of your magazine.

WILLIAM BIRSACK,
1618 Whitley Terrace,
Hollywood,
Calif.

(We can only repeat or leave it to the reader to repeat the last sentence of your letter, for which we thank you sincerely.—EDITOR.)

Suppose All Our Letters Were Like This One—We Should Have to Hide Our Blushes

Editor, AMAZING STORIES:

I have read AMAZING STORIES for several years and have thoroughly enjoyed every issue. I have remained silent until now, but finding it no longer possible to conceal my indignation and contempt for those who continually "slam" and find fault with your magazine, I shall now give voice to a few thoughts which have been beating at my brain for months.

Firstly—There are some who compare AMAZING with its rivals. They unerringly rank your magazine third. I, myself, have examined and re-examined the stories, illustrations, etc. of the three s-f magazines, and can find no great difference in the content of any of them. They are all presenting the same type of stories in a manner which I consider insuperable. True, each of the three mags is outstanding in one or more points, but in general, I rank them equally.

Secondly—Why throw brickbats at the authors? After all, the stories came from *their* minds, they knew just what they wanted to say, and how to put it. Moreover, the Editor can be depended upon to include in his magazine only the stories which are fit to publish. I am sure he knows a lot more about his job than any of us "public."

Thirdly—the artists who conceive and draw the illustrations cannot be justly derided. They have pictured bits of the text as it appears to them, or as they imagine it would appear to the author. Why should anyone criticize their work—especially when no one knows how the situation would appear in reality? The artists' ideas may be the correct ones after all.

I think AMAZING STORIES is a superb publication and will try to purchase every number as long as it continues. Those who do not enjoy it should keep silent—purchase of the mag is not compulsory!

MR. CARROLL JEFFERIS,
P. O. Box 424,
Newcastle,
Wyoming.

(Many thanks for your praise, which we hope we in good part deserve. Read some of the other letters and you will see why we like your appreciation.—EDITOR.)

Back Issues of AMAZING STORIES From the First Issue Can Be Supplied

Editor, AMAZING STORIES:

I am a reader of your magazine since its first appearance and the fact of my consistency should be all the needed proof of the excellency of your issues. Now through the number of years I have accumulated piles of AMAZING STORIES which mostly I have read three and four times and if you will kindly mention in your Discussion Columns that all the issues from Vol. 1, No. 1 to date are available by me through sale or trade to other readers who may want to complete their collections, you would greatly oblige an old reader.

MAX BELZ,
Waldoboro,
Maine.

At Last a Scolding Letter From Australia. Most Readers on the Continent Like Us

Editor, AMAZING STORIES:

I have just finished reading the Feb. 1936, issue, and between you and me I think it was a flop. If you call "Hoffman's Widow" science-fiction, your brain must be getting weak, and the chap who wrote "When the Top Wobbled" read the "Second Deluge" I'll bet and got his idea for the story from that epic. "Stroheim" had a rather sloppy ending, and "The Maelstrom of Atlantis" followed in the wake of the other Skidmore stories, scientists giving out gobs of information when they are on the point of being eaten, and jumping to conclusions all the

time. "The Lurking Death," "We of the Sun" and "21931" were the only ones that had any claims to be good science-fiction.

Luckily for the circulation of AMAZING STORIES you seldom produce such a rotten issue as this.

In going bi-monthly you have cleared the way for your biggest rival. Without doubt it will now become the best s.t.f. magazine. You asked for more letters, and you have got this one.

If possible will you please send me a list of the back issues of A.S. that you have and the prices.

JOHN GREGOR,
75 Wright Street,
Adelaide, South Australia.

(Do you in all earnestness think things are as bad as all that? Skidmore has been so highly appreciated for his work in our pages that we have given him a great deal of prominence. As far as back issues are concerned, we have comparatively few on hand, well preserved or "Rotten." We have the addresses of several dealers in back issues of magazines in this locality, but we think that it would be difficult to find our magazine on their shelves. Your query about back issues will go to our circulation head.—EDITOR.)

An Appreciation From the Antipodes in Which Correspondents Are Asked For

Editor, AMAZING STORIES:

The large number of Aussie correspondents in your Discussions prompts me to add my appreciation of your really unusual mag.

I have been reading AMAZING STORIES now for two years, and after the old unexciting stuff, they certainly are revivers.

The family all said, "You're mad!" when I first brought one home, but now I find even the most hardened objectors with their noses glued to the mag. The same thing happened with my friends, and they all get A.S. now.

There is not much use giving any list of the stories we like. The above speaks for itself, we like 'em all.

Now what about a few American or any overseas pen friends. We have quite a few boys here in the A.S. circle, all from 20 to 26, and will guarantee to answer any letter on any subject whatever.

Thanking you also for an excellent medium, to promote arguments, namely your mag. stories. We hold monthly discussions.

EVAN C. BOWEN,
15 Hall Street,
Moonee Ponds W.4,
Melbourne, Australia.

(AMAZING STORIES certainly has many friends on the distant continent of our Antipodes. It is agreeable for an editor to be told that his efforts succeed in amusing his readers, but it is a subject for far higher gratification when his work is appreciated in the sense disclosed in your letter. It is the highest type of compliment to tell of periodical discussions inspired by AMAZING STORIES.—EDITOR.)

We Thank You For Your Appreciation of Our (or your) Magazine. You will undoubtedly Hear From Some of Our Readers

Editor, AMAZING STORIES:

I have been a constant reader of your magazine since 1932, and I am just getting around to compliment you on the fine stories that you are printing. AMAZING STORIES can hardly be classified as a "pulp" magazine. The quality of the stories, the fine authors, and the manner in which it is presented makes your journal one of the finest on the market. Keep up the good work, please.

Often one sees in the Discussion Columns requests for back numbers. Seeing that the demand is rather large, I am now obtaining back numbers and selling them to fans who wish to complete their collections. Anyone wishing to obtain a price list should send their requests to Volper-Simon, 2906 Euclid Ave., Cleveland, Ohio.

I would appreciate it very much if you would refer me to those who write in asking for back numbers in the future.

DANIEL B. VOLPER,
2906 Euclid Ave.,
Cleveland, Ohio.

A Letter From a Kind-Hearted Lady and a Suffering Editor Needs a Little Kindness Now and Then

Editor, AMAZING STORIES:

Having missed getting the magazine for some time (or maybe it's two months that makes it seem long) I finally got the October issue. I haven't read any of the stories yet, but I did read the Discussions Column, hence this letter. Poor Editor, they are still tossing brickbats and roses at you. * * * * * "what one correspondent praises another attacks." * * * * * That, dear Editor, is one thing you can always be sure of. You will always be kissed on one cheek and slapped on the other. If you ever got all your letters filled with praise, you couldn't stand the shock. * * * * * Cannot you correspondents get it into your heads that you will never get to agree on any one thing? So why

don't you all be still? Me too. 'Scuse me, Editor, I sort of forgot myself for a minute and scolded those dear readers. If you gave them gold books with diamond chips they'd howl for platinum with emerald chips. Don't mind me, Readers, I'm only scolding you so the Editor will get a rest. I would like letters from either sex; my age 22 years. Let's go.

MRS. VIDA SCHNEIDER,
25 Putnam Avenue,
Portchester, N. Y.

(We were obliged to abbreviate this charming letter. We think that those who answer the request to be her "pen-pals" will have a real feast for she certainly writes well and with lots of spirit.—EDITOR.)

A Pleasant Appreciation of AMAZING STORIES Conveying Encouragement to Its Staff

Editor, AMAZING STORIES:

For my appreciation of your artistic cover for April, I shall voice my opinion among the readers. The April cover on AMAZING is the best cover I have seen on your magazine since the August, 1935 issue and the best in five issues of your rivals. You are rapidly approaching the TOP. Keep it up. You have a LOYAL READER behind you!

The best stories in the last six issues have been, "Luvium Under the Sand"—McKenzie, "He Who Shrank"—Henry Hasse, "Human Pets of Mars"—Leslie Stone, "Death Creeps the Moon"—Wede, "Twin Worlds"—Neil Jones. These are the best in my estimation although they may vary with others. So far I have found only one story I did not rather like and it was "The Isle of Juvenescence" by Bob Olsen.

Well, I have to close, I hope I am not disappointed by not seeing my letter in "Discussions" as it will make me think you do not care for my writing and do not appreciate my thanks.

Good luck to AMAZING and please come out a MONTHLY, Toodlewoo till JUNE.

ARTHUR A. STANFILL,
P. O. Box 258,
Newton, Kansas.

(We have felt that by a somewhat rigid selection of stories we have maintained a good standard of literature. Bob Olsen is one of our most appreciated authors.—EDITOR.)

A Suggestive Letter From South Africa.

Editor, AMAZING STORIES:

I have just finished reading the October number of AMAZING STORIES and I must say and I think that it is good. The best story was the human Pets of Mars. Leslie F. Stone

has a very nice style of writing and knows how to make her characters live. The Council of Drones was also very interesting. The Outpost on Ceres good. The editorials are excellent. Mr. Morey is certainly a good artist. Artists I notice come in for the most brick-bats. While Mr. Morey is good, it would be a great help to get another artist. Discussions are good. The remarks after the letters are fine.

Reprint some of the old stories. If you start monthly again you can reprint some of the old stories. Many readers are new to AMAZING STORIES and would not have read them. Also please reprint some of the late Stanley J. Weinbaum's stories.

Here is one thing which I don't understand. AMAZING STORIES costs 25 cents in America. That is about 1/1d here. But it only costs 6d here, that is 12 cents.

I would be glad to hear from any boy of 15. I would be glad to exchange things of interest and also opinions and ideas on science fiction or photography.

M. DRUKET,
64 Buxtin Street,
Doornfontein,
Johannesburg, South Africa.

(A letter of the type of the above is encouraging to our staff and we appreciate it highly. We are glad you enjoy the Editorials. We are taking into consideration the printing some repeats of stories published in former issues. There are several things involved in such action which require consideration on various lines. If you will look at the date of the magazines you buy for a reduced price you will probably find that they are out-of-date copies.—EDITOR.)

Criticisms of the Present Magazine and Reminiscences of Ten Years Ago

Editor, AMAZING STORIES:

May a chap who has been a quiet reader of your publication for over eight years put in a word in your eternally interesting "Discussions" column? Never felt particularly like writing as I don't like to write letters, but today, finding myself with time on my hands, I have decided to put my two (three?) cents in (for Britishers, read "tuppence") "one and happiness"?

Can't say that I think you have consistently maintained a high level or have always been the best of your type of magazine. In fact, about two years ago, A. S. had dropped to a frighteningly low level. But there has been a steady climb since. And now, with the past few issues, you are about the only magazine now being published that maintains the science in science-

fiction. It does my heart real good to see these signs of progress and it will be a day for general rejoicing when you can return to the "gold standard" and go monthly again.

"Uncertainty" by that sterling writer, John W. Campbell, Jr., has the edge over all stf. serials published during 1936 in any stf. magazine. It is excellent. Please keep Campbell busy. There is a man who knows his science and is capable of turning dry text-book facts into thrilling live action. If only all writers could do likewise! That would be the Utopia of science-fiction.

Of the shorts in the December issue, the mysterious "Wede's" "Death Creeps the Moon" has a slight edge over the others. Here is a writer with a new unique style and approach. Bully for Wede, let's have more of him. And I wonder if you'd tell who he is?

Philip Bartel's "Time Control" is fine as have been all the stories this man has written. How about a sequel? Didn't care for Olsen's "Space Marines" yarn at all. Get him to write some more of his fourth-dimensional yarns, will you?

I wonder if you heard that there is going to be the first Science Fiction Convention in all history tomorrow (Oct. 18th) right here in good old Philadelphia? We expect a big turn-out. The event has been organized by that most wide-awake and growing organization, the grand old International Scientific Association. As you know, the I. S. A. (of which I have the honor of being a member) uses as its emblem, by your permission, the fine emblem of "Scientifiction" that used to grace your cover in days gone by. About eight fellows from New York, including such well-known fans as David A. Kyle, Jim Blish, John B. Michel, Donald A. Wollheim, and Herbert E. Goudket are coming here to meet our bunch. Milton A. Rothman, Robert A. Madle, Charles Bert, Raymond Peel Mariella, and the rest will be here and you never can tell who else will show up.

The International Scientific Association goes straight back in antecedents to the original and first science-fiction club, the Science Correspondence Club organized in AMAZING's pages in 1928. And it is still today, the best and most active members' club going. They were the only club to celebrate the Tenth Anniversary of Science-Fiction last April. In case any readers want to know more about the grand old I. S. A., or to see a copy of our official organ, the best of its kind (a 20 page, 8 x 11 magazine, with colored cover) write to William S. Sykora (president), 31-51 41st Street, Long Island City, N. Y. Better send a dime for the copy of the club paper so as to make sure you get one in the rush.

Afraid that this is getting too long. Here's life to the old "Aristocrat of Science-Fiction," our own AMAZING STORIES!

BURTON A. ALLEN,
1563 No. Adams St.,
Philadelphia, Pa.

(We always appreciate a letter of true criticism, such as yours. It may be the case that the very things you object to are liked by others, but we wish AMAZING STORIES to follow pretty closely the lines you indicate. We will keep "Wede" in mind; he is a contributor, not in any way a member of the Editorial Staff. Your reminiscences of the International Science Club are most interesting to us.—EDITOR.)

An English Writer to Discussions Asks for an American Correspondent or "Pen-Pal" as Some Call It

Editor, AMAZING STORIES:

I have already written you one letter complimenting you on "A. S." and having just finished a back number, that of August 1935, I feel I must write another. You may say "that's a long call" but since I discovered "A. S." I have collected numbers much later than that, I've certainly been through a great part of London searching for them. I'm not looking forward to the time when I've found and read every back number and have to wait a month between copies. Going back to August 1935, the painting on the cover is certainly very fine, in fact up to date it is, in my opinion, the best. Morey wants a pat on the back, you might give him it for me, and oblige. "The Never Dying Light" what a story! I enjoyed it from beginning to end. The idea of weaving a plot round some historical or biblical fact is certainly clever. I think there are many other stories that could be built up in this way. A brick bat, —why is it that America seems to have the impression that most Englishmen walk about wearing monocles; and make such remarks as "By Jove, old peanut", "Jolly fine", "Rather by gad!", "Don't throw pearls to the swine, you cads", etc. etc. A few poor devils are affected this way, but only a few, so give us a break please. I would like to repeat that I should like to correspond with an American boy aged about 19 about any thing.

A. J. BALCOMBE
110 Capel Rd. Forest Gate,
London, England.

(We are sure that you are doing us Americans an injustice. We do not habitually accuse the English of the faults in their language which you specify.—EDITOR.)

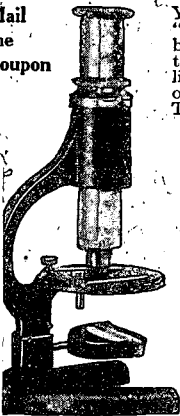


Boys, 12 to 16, You Don't Have to Buy This SPEEDY BICYCLE OR ANY OF 300 OTHER BIG PRIZES!

OH, BOY! What a thrill you'll get when you flash down the street on this deluxe streamlined aluminum bicycle! Comes to you fully equipped with blast hornlite, ~~con~~ brake, platform carrier, and cushioned balloon tires. Light in weight, enabling you to make quick "get-away." You don't need to buy this bike, or any of 300 other prizes. Easily earn whatever you want by delivering our magazines to customers whom you obtain in your neighborhood. It's fun. And you make MONEY, too! Many boys earn a prize the first day. You can do the same. Mail the coupon NOW and we'll start you.

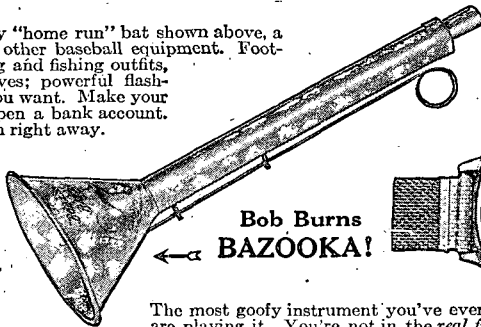


Mail
the
coupon



You can earn the sturdy "home run" bat shown above, a "Dizzy" Dean glove, or other baseball equipment. Football, basketball, camping and fishing outfits, too! Keen hunting knives; powerful flashlights. Earn whatever you want. Make your own spending money; open a bank account. To start, mail the coupon right away.

Boy, what fun you'll have with this microscope, watching tiny animals fight in a drop of water! Optically ground and polished lens; 200-power. Mail coupon.

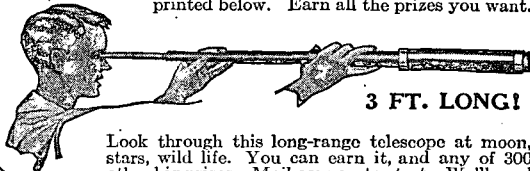


Bob Burns
BAZOOKA!

The fine wrist watch shown below is only one of the many styles you can earn. Mail the coupon to get started.



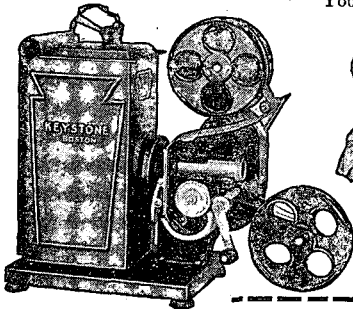
The most goofy instrument you've ever seen. Boys everywhere are playing it. You're not in the *real fun* unless you have one. You'll be surprised how easily you can earn it. Boys between 12 and 16 can start at once. Mail the coupon printed below. Earn all the prizes you want.



3 FT. LONG!

Look through this long-range telescope at moon, stars, wild life. You can earn it, and any of 300 other big prizes. Mail coupon to start. We'll send you 32-page Prize Book.

earn the machines shown; the right and run our own movie; or get a printing press and open a print shop. Make money. Get started at once. Mail the coupon.



MAIL THE
COUPON

Mail This Coupon Today and Get
OUR BIG PRIZE BOOK!

MAIL
COUPON
TODAY

Mr. Jim Thayer, Dept. 732
The Crowell Publishing Company, Springfield, Ohio

Dear Jim: I want to earn PRIZES and make MONEY. Start me, and send me your 32-page Prize Book.

Name.....Age.....

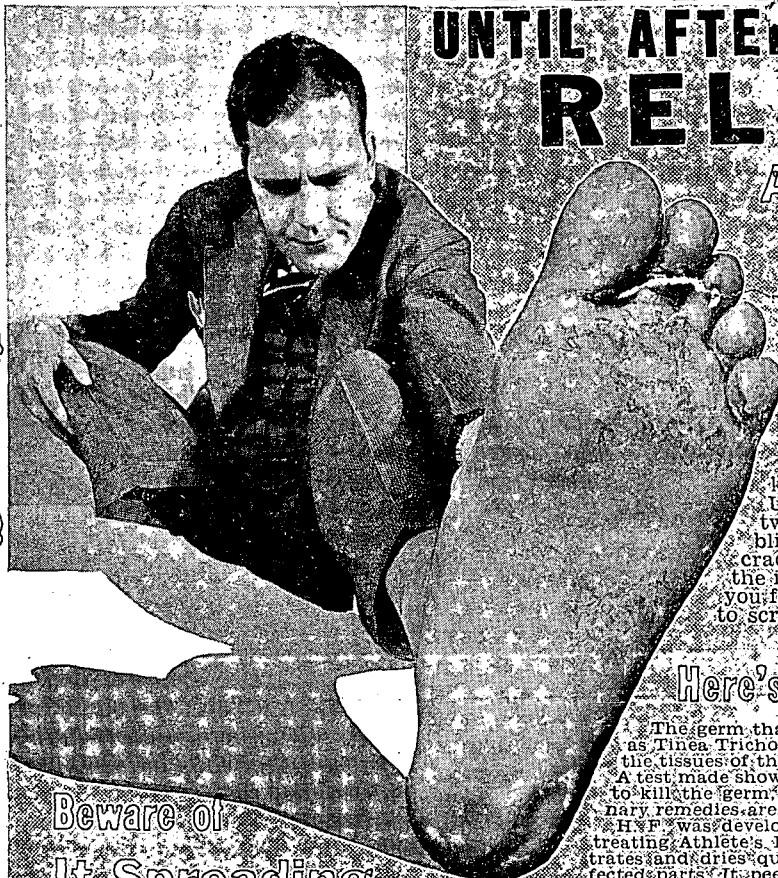
Address.....

City.....State.....

PAY NOTHING

UNTIL AFTER YOU GET RELIEF

ATHLETE'S FOOT (Foot Itch)



According to the Government Health Bulletin, No. E-28, at least 50% of the adult population of the United States are being attacked by the disease known as Athlete's Foot. Usually the disease starts between the toes. Little watery blisters form and the skin cracks and peels. After a while the itching becomes intense and you feel as though you would like to scratch off all the skin.

Here's How to Treat It

The germ that causes the disease is known as Tinea Trichophyton. It buries itself deep in the tissues of the skin and is very hard to kill. A test made shows it takes 20 minutes of boiling to kill the germ, so you can see why the ordinary remedies are unsuccessful. H. F. was developed solely for the purpose of treating Athlete's Foot. It is a liquid that penetrates and dries quickly. You just paint the affected parts. It peels off the tissues of the skin where the germ breeds.

Beware of It Spreading

Often the disease travels all over the bottom of the feet. The soles of your feet become red and swollen. The skin also cracks and peels, and the itching becomes worse and worse.

Get rid of this disease as quickly as possible, because it is very contagious and it may go to your hands or even to the under arm or crotch of the legs! Most people who have Athlete's Foot have tried all kinds of remedies to cure it without success. Ordinary germicides, antiseptics, salve, or ointments seldom do any good.

Itching Stops Immediately

As soon as you apply H. F. you will find that the itching is immediately relieved. You should paint the infected parts with H. F. night and morning until your feet are well. Usually this takes from three to ten days, although in severe cases it may take longer or in mild cases less time.

H. F. will leave the skin soft and smooth. You will marvel at the quick way it brings you relief, especially if you are one of those who have tried for years to get rid of Athlete's Foot without success.

GORE PRODUCTS, INC.

N. F. U.

845 Perdido St., New Orleans, La.

Please send me immediately a complete treatment for foot trouble as described above. I agree to use it according to directions. If at the end of 10 days my feet are getting better, I will send you \$1.00. If I am not entirely satisfied I will return the unused portion of the bottle to you within 15 days from the time I receive it.

NAME

ADDRESS

CITY STATE

H. F. Sent On Free Trial

Sign and mail the coupon and a bottle of H. F. will be mailed you immediately. Don't send any money and don't pay the postman any money. Don't pay anything any time unless H. F. is helping you. If it does help you we know that you will be glad to send us \$1.00 for the treatment at the end of ten days. That's how much faith we have in H. F. Read, sign and mail the coupon today.

